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# Floristic Index for Establishing Assessment Standards: A Case Study for Northern Ohio

by Barbara K. Andreas, Robert W. Lichvar



August 1995 – Final Report
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# Floristic Index for Establishing Assessment Standards: A Case Study for Northern Ohio

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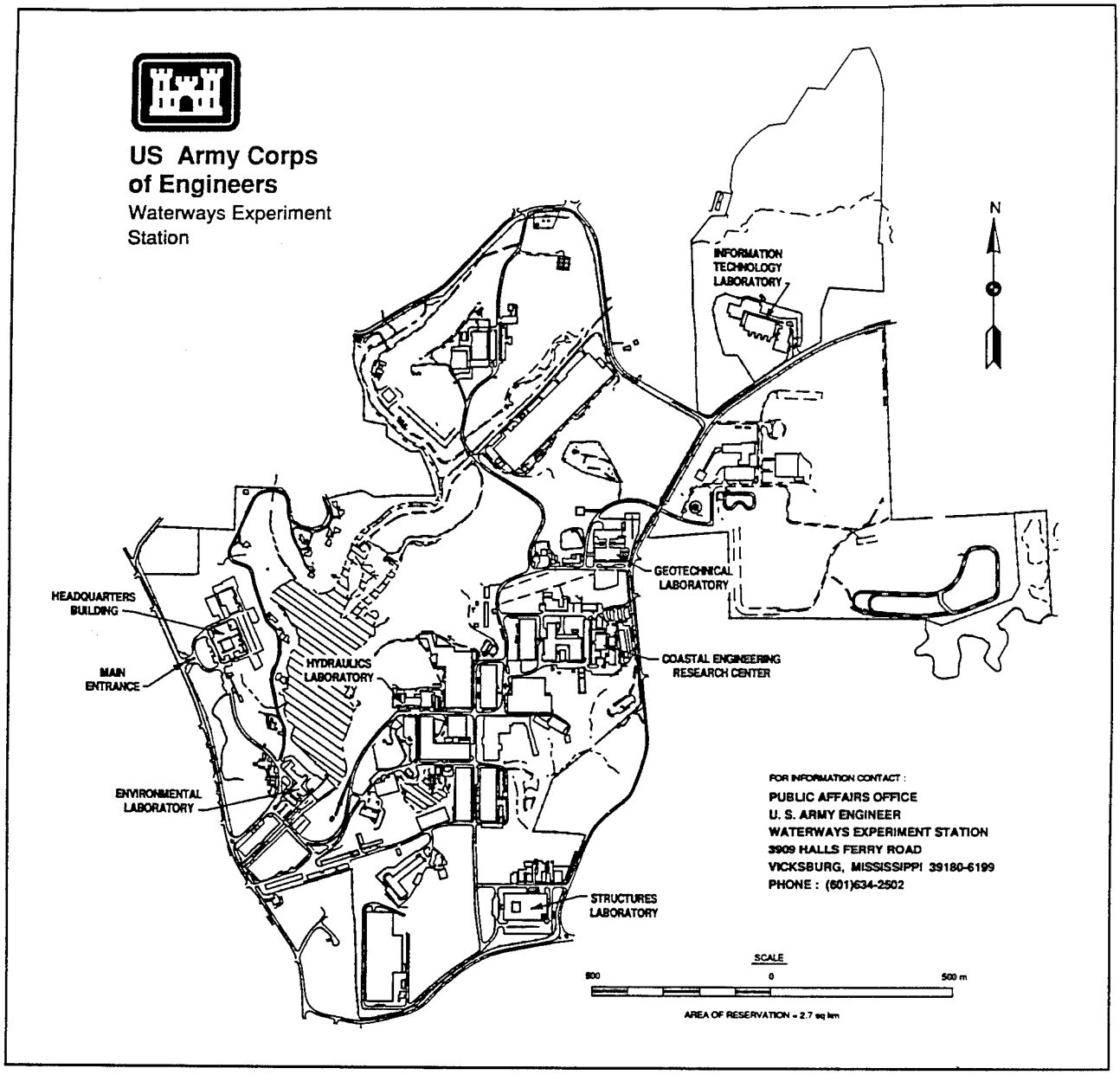


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# Wetlands Vegetation

## *Floristic Index for Establishing Assessment Standards: A Case Study for Northern Ohio (TR WRP-DE-8)*

### ISSUE:

The assemblage of plant species can indicate various responses to environmental gradients and disturbances. Information is needed about the occurrence of species within natural and disturbed plant communities for establishing reference standards for use in the hydrogeomorphic approach used for evaluating wetland conditions and natural places.

### RESEARCH:

A floristic checklist was compiled for 31 counties in northern Ohio. Rankings of 1 to 10 were assigned to native taxa based on their degree of fidelity to a range of synecological parameters. Plants found in a variety of plant communities, including disturbed sites, were assigned rankings of 1 to 3. Rankings of 4 to 6 were applied to taxa that typically are associated with a specific plant comunity, but tolerate moderate disturbance to that community. Rankings of 7 to 8 were applied to those taxa associated with a plant community in an advanced successional stage that has undergone minor disturbance. Those plants with high degrees of fidelity to a narrow range of synecological parameters were assigned a value of 9 to 10.

### SUMMARY:

The floristic quality index for 2,063 plant species in northern Ohio provides a tool to assess the quality of naturalness or presence of conservative species. It allows for an objective numerical comparison of two or more unrelated community types and reflects numerically the impact of human disturbance by taking into account the presence of alien taxa. The ability to evaluate floristically and assign a repeatable quantitative value has use in assessing wetland restoration projects and in designing and monitoring mitigation creations.

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# Contents

# Preface

The work described in this report was authorized by Headquarters, U.S. Army Corps of Engineers (HQUSACE), as part of the Wetlands Evaluation Task Area of the Wetlands Research Program (WRP). The work was performed under Work Unit 32755, for which Mr. Dan Smith was the Technical Manager. Mr. Sam Collinson (CECW-OR) was the WRP Technical Monitor for this work.

Mr. Dave Mathis (CERD-C) was the WRP Coordinator at the Directorate of Research and Development, HQUSACE; Dr. William L. Klesch (CECW-PO) served as the WRP Technical Monitor's Representative; Dr. Russell F. Theriot, Environmental Laboratory (EL), U.S. Army Engineer Waterways Experiment Station (WES), was the Wetlands Program Manager. Mr. Ellis J. Clairain, Jr., EL, WES, was the Task Area Manager.

The work was performed at Cuyahoga Community College and Kent State University, OH, by Dr. Barbara K. Andreas and at WES by Mr. Robert W. Lichvar, Wetlands Branch (WB), Ecological Research Division (ERD), EL. The preparation of the report was under the direct supervision of Mr. E. Carl Brown, Chief, WB; Dr. Conrad J. Kirby, Chief, ERD; and Dr. John W. Keeley, Director, EL.

Grateful appreciation is extended to Mr. Aaron R. Andreas, Mr. Gary R. Bryan, Ms. Kim D. Herman, and Mr. Jeffrey D. Knoop for their assistance in the preparation of the manuscript. Special thanks are extended to Dr. Gerould Wilhelm for giving much advice and leadership in the development of this project.

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# 1 Introduction

The U.S. Army Corps of Engineers is developing a procedure for assessing wetland functions using functional indices (Smith 1995). This procedure compares wetlands using functional indices calibrated to regional reference wetlands. Reference standards are conditions exhibited by a group of reference wetlands that correspond to the highest level of functioning (highest sustainable capacity) across the suite of functions of a regional wetland subclass. The quality of species occurrences at regional reference wetlands can be used to assist in the calibration of the vegetation components of functional indices.

The purpose of this report was to adapt the existing Wilhelm method (Swink and Wilhelm 1979, 1994) for evaluating the reference standard for species occurrences at reference wetlands and other vegetated habitats as a method to evaluate natural places by providing a floristic quality assessment index. This report contains a floristic checklist that is applicable to 31 counties in northern Ohio. The quality index ratings presented here are intended to both assist regional efforts to establish reference standards for species occurrence in wetlands and evaluate natural places in this region.

The modern native flora of northern Ohio is composed of a mixture of taxa that became established after the melting of the last Wisconsinan ice advance, about 16,000 BP (Goldthwait 1959). The native flora of this part of glaciated Ohio resulted from (a) the northward migration of species that survived south of the glacial moraine (Delcourt and Delcourt 1981), (b) the establishment in suitable habitats of northern plants that had migrated southward into Ohio in front of the glacial advance, (c) the eastward extension of prairie plants and plants more typical of drier areas that occurred during the Xerothermic Period 8,000 - 5,000 years BP (Benninghoff 1964), and (d) the westward migration of coastal species via eastward drainage channels that formed in the St. Lawrence lowlands as the ice front retreated (Andreas 1989).

At the time of the arrival of the European settlers, it is estimated that about 96 percent of Ohio was forested (Gordon 1966; Cooperrider 1982). The remaining 4 percent of the land surface was open areas of freshwater marshes, peatlands, prairies, and barrens (Sears 1926; Transeau 1935; Gordon 1966, 1969). Through historical accounts written by early land surveyors, Gordon (1969) was able to reconstruct the original (presettlement) vegetation of Ohio

by focusing on large tracts of contiguous forest types. Forsyth (1970) correlated Gordon's vegetation types to edaphic factors such as the availability of moisture, parent geologic material, topography, and direction of slope. Forsyth found that the distribution of these vegetation types, or plant communities, is predictable on the basis of climate, geology, and topography.

Through time, native taxa adapted to a specific set of biotic and abiotic factors of natural disturbance such as the local extremes of drought, inundation, fires, storms, and faunal interactions (Wilhelm and Ladd 1988; Hobbs and Huenneke 1992). Because of periodic natural disturbances, a vegetation seldom maintains a constant species composition for more than a few centuries (Noss 1985).

The arrival of European settlers had a profound and permanent effect on the native landscape by changing its physical character (clearing, plowing, and draining) and by the introduction, both deliberate and unwittingly, of alien taxa, creating what Pielou (1979) has called "man-made disjunctions." The terms "alien," "non-native," and "exotic" are used to refer to taxa believed to have been introduced into the flora either with or after the arrival of European settlers. A "native" taxon is one that has maintained historical integrity and ecological processes since some time prior to European settlement (Maser 1990).

The native plant communities observed by the early surveyors and explorers now include a large number of non-native (alien) taxa. Cooperrider (1982) estimated that approximately one-third of the Ohio flora is composed of these alien (mostly Eurasian) species. By contrast, the Hawaiian Islands (one-sixth the size of Ohio) may have as many as 4,600 species of exotic plants, which is about three times the number of native plant species (Soule 1990). The flood of exotic species, along with anthropogenic disturbances, has tended to make more uniform natural landscapes by providing an opportunity for alien taxa to replace native plant species. With the abundance of alien taxa, natural places (natural areas) with intact native floras are becoming rarer.

The surviving undisturbed natural areas dominated by native flora, or those containing remnants of rare plant communities, are often sought out as special places or significant natural areas. To date, there is no adequate way to provide meaningful comparisons of the flora of the different types of plant communities found in these natural places. However, field biologists frequently are asked to evaluate their quality. Herrick (1974), with the help of numerous individuals, compiled preliminary data on 580 Ohio natural areas. In the early 1980s, the Ohio Chapter of The Nature Conservancy, with the help of regional experts, organized a list (scorecard) of the 100 best natural areas remaining in Ohio. Assessing the ecological value of these areas was done visually with the only criterion often being the presence of rare or unusual plant species.

In an attempt to make more objective evaluations and assessments of open land areas, Wilhelm (Swink and Wilhelm 1979) and Wilhelm and Ladd (1988) devised an index of conservatism, a component of their Natural Area Assessment. Their evaluation is based on the fundamental character of the native flora of a region. A numerical quality rating, called the coefficient of conservatism, is assigned to each plant. Each numerical value is an expression of the taxon's autecological value with respect to all other taxa in the flora. The higher the numerical rating, the more conservative is the taxon. Species conservatism reflects the ecological specializations that a plant displays to a specific habitat or set of environmental conditions. The natural quality of an area is reflected by its richness in conservative species.

The coefficient of conservatism is independent of frequency. A plant may be widely distributed in Ohio, but occur in only a limited number of habitats. *Viburnum acerifolium*, primarily found in rich mesic forests, is an example of this situation. Conversely, a plant species may be somewhat uncommon, but occur in various habitats throughout the study range. *Habenaria flava* var. *herbiola*, which grows in wet woods, fens, weedy fields, and margins of pools, is an example. Both species have a value of 6 (Appendix A).

# 2 Methods

A floristic checklist was compiled for 31 Ohio counties (Appendix A). Data for 20 counties (Ashland, Ashtabula, Columbiana, Cuyahoga, Geauga, Holmes, Knox, Lake, Licking, Lorain, Mahoning, Medina, Morrow, Perry, Portage, Richland, Stark, Summit, Trumbull, and Wayne) were taken from *The Vascular Flora of the Glaciated Allegheny Plateau* (Andreas 1989). These data were collected from extensive field collections by the author as well as from surveys of major Ohio herbaria with specimens from the region (Cleveland Museum of Natural History, Kent State University, Oberlin College, The Ohio State University, Ohio University, and the University of Akron).

Additional records were obtained for Erie, Defiance, Fulton, Henry, Huron, Lucas, Ottawa, Sandusky, Seneca, Williams, and Wood counties by examining county dot-distribution maps prepared by Braun (1967), Cooperrider (1995), Fisher (1988), and Furlow (1991). Additional county records for three species, *Carex longii*, *Panicum spretum*, and *Utricularia geminiscapa*, were obtained from the Division of Natural Areas and Preserves, Ohio Department of Natural Resources. In all, 2,063 species and 30 interspecific hybrids are included on the checklist.

The arrangement of the checklist is alphabetical by genus and species; the family name for each taxon is given in the right column. Nomenclature and circumscription follow Gleason and Cronquist (1991). Where a name differs from the one used by Andreas (1989), the latter is given in synonymy. The native status of taxa was determined from Fernald (1950), Braun (1967), Cooperrider (1995), Furlow (1991), and Gleason and Cronquist (1991).

Following Wilhelm and Ladd (1988), each taxon included in the checklist was assigned a numerical value. The assignment of these values by the authors was based on (a) the senior author's extensive field experience (over 25 years) with the flora of Ohio, (b) descriptions of habitat preferences in local and regional manuals, (c) a survey of information on herbarium labels, and (d) published abstracts of state-listed taxa (McCance and Burns 1984). The values assigned become less valid when applied beyond the study area.

Native species were given numerical ranks, or coefficients of conservatism, between 0 and 10. The ranking of 0 was given to those native taxa that, primarily as a result of human disturbance, have become opportunistic invaders

of natural areas, often creating extensive monocultures (for example, *Phragmites australis*). A ranking of 0 also was assigned to those native taxa that are typically part of a ruderal community (for example, *Ambrosia artemisiifolia*).

Rankings of 1 to 10 were assigned to native taxa based on their degree of fidelity to a range of synecological parameters. Plants found in a variety of plant communities, including disturbed sites, were assigned rankings of 1 to 3. Rankings of 4 to 6 were applied to taxa that typically are associated with a specific plant community, but tolerate moderate disturbance to that community. Rankings of 7 to 8 were applied to those taxa associated with a plant community in an advanced successional stage that has undergone minor disturbance. Those plants with high degrees of fidelity to a narrow range of synecological parameters were assigned a value of 9 to 10.

All alien (non-native) taxa were assigned the value of 0. These plants are preceded with an asterisk (*) in the "Comments" column on the checklist, and their scientific name is printed in bold type.

Plants listed as "threatened," "endangered," or "extirpated" in the Ohio rare plant list (Division of Natural Areas and Preserves 1992) are noted in the "Comments" column on the checklist (Appendix A). While Ohio's rare plant list is updated every 2 years and the status of a taxon may change with the discovery of new sites, the majority of the "rare" taxa are inherently a rare part of the Ohio flora and generally have coefficient of conservatism rankings of 7-10.

Some taxa on the checklist are preceded by a double asterisk (**) in the "Comments" column. These plants fall into the following conditions: (a) taxa considered to be native in another region of Ohio, but adventive or naturalized within the study area (*Aralia spinosa, Campsis radicans, Cercis canadensis, Gymnocladus dioica, Hydrangea arborescens, Ilex opaca, Napaea dioica, Robinia pseudoacacia, Sagina decumbens, Thuja occidentalis*), and (b) taxa that include both native and non-native populations within the study area (*Physostegia virginiana, Pinus strobus, Prunella vulgaris*). For the latter group, the coefficient of conservatism ranking is based on native populations.

Rarely encountered interspecific hybrids, as included in Andreas (1989), Cooperrider (1995), and Furlow (1991), were eliminated from the list. Taxa rarely collected from landfills or gardens were deleted from the checklist.

# 3 Application of Coefficient of Conservatism to Floristic Quality Assessment System

Following Swink and Wilhelm (1979) and Wilhelm and Ladd (1988), the coefficients of conservatism can be used to arrive at a numerical value called the Floristic Quality Assessment Index (I). This numerical value provides a floristic based assessment of the natural area related to the degree of artificial disturbance indicated by the presence of non-native or opportunistic native taxa. The floristic quality assessment indices from different types of vegetation can be objectively compared. The index value does not imply that one type of vegetation is "better" than another; it simply provides a way of measuring the degree of naturalness of the species found there. The floristic quality assessment index is also useful in comparing how vegetation changes over time, either from natural succession or from management. In this situation, a repeatable vegetation sampling method would be used in conjunction with the floristic quality assessment index.

The application of this method requires field sampling by an experienced field biologist able to discern the subtle differences in the floristic elements. Following Wilhelm and Ladd (1988), the floristic quality assessment is constructed in the following manner:

*a.* Compile a list of the plants growing in the area to be assessed, independent of community types.

*b.* Assign coefficients of conservatism to each plant listed (Appendix A).

*c.* Determine the mean coefficient value by adding the coefficients of native plants recorded from the area, and dividing the sum by the total number of native plants.

*d.* Multiply the mean coefficient by the square root of the total number of native species.

*e.* The product obtained is the floristic quality assessment index (I).

Expressed mathematically,

$$I = \frac{R}{\sqrt{N}}$$

where

$I$ = floristic quality assessment index

$R$ = sum of valuation coefficients for all plants recorded in the area

$N$ = number of different native species recorded

According to Wilhelm and Ladd (1988), "by treating diversity as the square root of N, increasing extremes of diversity are dampened to allow lower-diversity, specialized and often small areas of very high mean quality to rate favorably in relation to larger, often more diverse areas with lower overall mean qualities."

Table 1 provides an example of a floristic quality assessment index for two Ohio peatlands. In addition to the presence of a *Sphagnum*-dominated mat, these two areas have in common that no alien taxa were recorded from within either study area. Flatiron Lake Bog contains 11 state-listed rare plants, whereas Silica Sand Quarry Bog contains 4. Flatiron Lake Bog (Andreas and Bryan 1990) is a low diversity, high quality natural area. The floristic quality assessment index value for Flatiron Lake Bog is I = 37.53. The second area, Silica Sand Quarry Bog, has developed on the floor of a sandstone quarry within the past 80 years (Andreas and Host 1983). The floristic quality assessment index value for Silica Sand Quarry Bog is I = 26.22. The difference in the floristic index values between the undisturbed Flatiron Lake Bog and the disturbed Silica Sand Quarry Bog are probably a result of human disturbance and is reflected in the numerical values between the two sites.

The range of floristic index values can vary depending upon the quality of the species composition occurring in an area. For example, Wilhelm and Ladd (1988) reported values for woodlands ranging from as low as 10 to as high as 80 (or more). When they compared three sites within the Chicago region, each about 1 acre[1] in size, the index value for an old field was I = 8.4, for a degraded prairie, I = 28, and for a high quality prairie, I = 50.

Assigned values for a particular species can differ between physiographic regions. For example, when Wilhelm and Ladd's species list for the old field (I = 8.4) was subjected to the coefficient of conservatism values presented in this study, the result is I = 10.2 (Table 2). The major difference in the values for the two areas is the coefficient of conservatism for *Aster drummondii*.

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[1] To convert acres to square meters, multiply by 4,046.873.

This plant is relatively rare in Ohio and is listed as endangered on Ohio's rare plant list (Division of Natural Areas and Preserves 1992). Therefore, the coefficient of conservatism values presented here will probably vary for another geographic region outside of northern Ohio.

Overall, Wilhelm and Ladd found that natural areas with ranking above 35 are significant from a regional perspective. Areas rating above 50 were extremely rare. It should be noted that Wilhelm and Ladd assigned special values (15 and 20) to those taxa considered threatened or endangered within the Chicago region. As a result, their Natural Areas Index values for rare communities would be higher than is possible under a strict 0-10 ranking system.

The floristic quality assessment index can be used in establishing reference standards for regional wetland subclass. The index can also provide a method to measure the response of the vegetation community to mitigation from invasion of non-native to native species. This measurement provides a numerical method to rate the results from various mitigation methods from either enhancement, restoration, or creation.

# 4 Conclusions

The floristic quality assessment index (index of conservatism) for northern Ohio was developed as a tool to assess the nativeness of an area based on the presence of conservative species. The floristic quality assessment index allows for an objective numerical comparison of two or more unrelated community types for the occurrence of higher quality assemblages of species, impacts by human disturbance reflected in the presence of alien species, or the capability to assist with calibration of the vegetation component of wetland functional indices. It allows for an objective numerical comparison of two unrelated community types and reflects numerically the impact of human disturbance by taking into account the presence of alien taxa.

Numerical values included in this report become less valid outside of the study area for several reasons. These include changes in species distribution patterns, abundance, and changes in habitat. Values for coefficient of conservatism are available for other areas outside of northern Ohio, including the state of Michigan (Herman et al. 1993) and northern Illinois (Swink and Wilhelm 1979, 1994). Michigan (Herman et al. 1993) has compiled for publication a Floristic Quality Assessment Index applicable to the entire state.

The floristic quality assessment index does provide a repeatable method for monitoring changes in species composition over time, evaluating wetland functions, natural area acquisition, selection of land management techniques, assessing the success of restoration efforts, designing and monitoring mitigation, and in evaluating wetlands. The results of land management, whether it be for mitigation or for restoration, require monitoring and evaluation. This report presents the background, the coefficient of conservatism values, and the steps to follow in order to establish a numerical rating for the floristic quality of plant communities in northern Ohio.

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**Table 1**
**Floristic Quality Assessment for Two Peatlands in Portage County, Ohio**

| Flatiron Lake Bog | | Silica Sand Quarry Bog | |
|---|---|---|---|
| Coefficient of Conservation | Taxon | Coefficient of Conservation | Taxon |
| 2 | *Acer rubrum* | 2 | *Acer rubrum* |
| 5 | *Aronia melanocarpa* | 5 | *Amelanchier arborea* |
| 7 | *Betula alleghaniensis* | 3 | *Andropogon virginicus* |
| 3 | *Bidens coronata* | 5 | *Aronia melanocarpa* |
| 10 | *Calla palustris* | 6 | *Bartonia virginica* |
| 9 | *Carex atlantica var. capillacea* | 6 | *Betula populifolia* |
| 8 | *Carex canescens* | 8 | *Carex canescens* |
| 9 | *Carex trisperma* | 5 | *Carex lacustris* |
| 7 | *Cephalanthus occidentalis* | 3 | *Danthonia spicata* |
| 10 | *Chamaedaphne calyculata* | 7 | *Drosera rotundifolia* |
| 5 | *Decodon verticillatus* | 7 | *Gaylussacia baccata* |
| 7 | *Drosera rotundifolia* | 4 | *Juncus canadensis* |
| 6 | *Dulichium arundinaceum* | 1 | *Juncus effusus* |
| 7 | *Gaylussacia baccata* | 1 | *Leersia oryzoides* |
| 2 | *Glyceria striata* | 3 | *Lycopodium clavatum* |
| 7 | *Ilex verticillata* | 9 | *Lycopodium inundatum* |
| 1 | *Juncus effusus* | 6 | *Lycopodium tristachyum* |
| 10 | *Larix laricina* | 7 | *Nyssa sylvatica* |
| 1 | *Leersia oryzoides* | 2 | *Populus grandidentata* |
| 4 | *Lycopus virginicus* | 2 | *Populus tremuloides* |
| 10 | *Nemopanthus mucronatus* | 4 | *Prunus pensylvanica* |
| 7 | *Nyssa sylvatica* | 4 | *Quercus palustris* |
| 6 | *Osmunda cinnamomea* | 1 | *Scirpus cyperinus* |
| 4 | *Polygonum arifolium* | 4 | *Spiraea tomentosa* |
| 10 | *Rhynchospora alba* | 4 | *Thelypteris palustris* |
| 5 | *Rubus hispidus var. obovalis* | 8 | *Toxicodendron vernix* |

***(Continued)***

Note:
R = Sum of valuation coefficients for all plants recorded in the area.
N = Number of different native species recorded.
I = Floristic quality assessment index.

**Table 1 (Concluded)**

| Flatiron Lake Bog | | Silica Sand Quarry Bog | |
|---|---|---|---|
| Coefficient of Conservation | Taxon | Coefficient of Conservation | Taxon |
| 10 | *Sarracenia purpurea* | 7 | *Triadenum virginicum* |
| 1 | *Scirpus cyperinus* | 2 | *Typha latifolia* |
| 8 | *Toxicodendron vernix* | 7 | *Vaccinium angustifolium* |
| 7 | *Triadenum virginicum* | 5 | *Vaccinium corymbosum* |
| 8 | *Vaccinium macrocarpon* | 8 | *Vaccinium macrocarpon* |
| 5 | *Vaccinium corymbosum* | | |
| 2 | *Viburnum dentatum var. lucidum* | | |
| 9 | *Woodwardia virginica* | | |
| 10 | *Xyris difformis* | | |
| R = 222; = N = 35; I = 37.53 | | R = 146; N = 31; I = 26.22 | |

**Table 2**
**Index Values for Plants in an Old Field in Chicago Region Using Coefficient of Conservatism from Wilhelm and Ladd (1988) and Present Study**

| Taxon | Wilhelm and Ladd[1] Values | Present Study Values for Northern Ohio |
|---|---|---|
| *Acalypha rhomboidea* | 0 | 0 |
| *Achillea millefolium* | | 0 |
| *Agrostis alba (= A. gigantea)* | | 0 |
| *Ambrosia artemisiifolia* | 0 | 0 |
| *Asclepias syriaca* | 0 | 0 |
| *Aster pilosus* | 1 | 1 |
| *Aster drummondii* | 2 | 8 |
| *Barbarea vulgaris* | | 0 |
| *Carex laxiflora* | 1 | 3 |
| *Chrysanthemum leucanthemum* | | 0 |
| *Cichorium intybus* | | 0 |
| *Cirsium arvense* | | 0 |
| *Cirsium vulgare* | | 0 |
| *Crataegus mollis* | 2 | 3 |
| *Dactylis glomerata* | | 0 |
| *Danthonia spicata* | 5 | 3 |
| *Daucus carota* | | 0 |
| *Festuca elatior* | | 0 |
| *Fragaria virginiana* | 1 | 2 |
| *Geum canadense* | 0 | 2 |
| *Geum laciniatum* | 1 | 2 |
| *Lonicera maackii* | | 0 |
| *Medicago lupulina* | | 0 |
| *Panicum implicatum (= P. languinosum)* | 3 | 2 |
| *Parthenocissus inserta (= P. vitacea)* | 1 | 1 |

*(Continued)*

Note:
R = Sum of valuation coefficients for all plants recorded in the area.
N = Number of different native species recorded.
I = Floristic quality assessment index.
[1] Wilhelm and Ladd did not assign values for alien taxa.
[2] Considered an alien taxon in Ohio.

**Table 2 (Concluded)**

| Taxon | Wilhelm and Ladd[1] Values | Present Study Values for Northern Ohio |
|---|---|---|
| *Phleum pratense* | | 0 |
| *Plantago lanceolata* | | 0 |
| *Poa pratensis* | | 0 |
| *Polygonatum canaliculatum* | 3 | 5 |
| *Potentilla simplex* | 4 | 1 |
| *Prunella vulgaris* | 0 | 0 |
| *Prunus serotina* | 1 | 3 |
| *Prunus virginiana* | 1 | 2 |
| *Pyrus ioensis*[2] | 2 | 0 |
| *Rhamnus carthartica* | | 0 |
| *Rosa multiflora* | | 0 |
| *Rubus occidentalis* | 2 | 1 |
| *Solanum dulcamara* | | 0 |
| *Solidago altissima (= S. canadensis)* | 1 | 1 |
| *Solidago nemoralis* | 4 | 3 |
| *Taraxacum officinale* | | 0 |
| *Trifolium pratense* | | 0 |
| *Ulmus americana* | 3 | 1 |
| *Viola papilionacea (= V. sororia)* | 0 | 2 |
| *Vitis riparia* | 4 | 4 |
| | R = 42; N = 25; I = 8.4 | R = 50; N = 24; I = 10.2 |

# Appendix A
# A Checklist of Vascular Plants for the Floristic Quality Assessment for Northern Ohio

Key: C of C = Coefficient of Conservatism
* and bold = Alien Taxon
** = Native to another region of Ohio, or includes both native and nonnative populations
X = Extirpated[1]
E = Endangered[1]
T = Threatened[1]

1 Division of Natural Areas and Preserves 1992. References cited in this appendix are listed at the end of the main text.

| COMMENTS | C OF C | GENUS | SPECIFIC EPITHET | FAMILY |
|---|---|---|---|---|
| * | 0 | **Abutilon** | **theophrasti** | MALVACEAE |
| * | 0 | **Acalypha** | **ostryaefolia** | EUPHORBIACEAE |
| | 0 | Acalypha | rhomboidea | EUPHORBIACEAE |
| | 0 | Acalypha | virginica | EUPHORBIACEAE |
| | 3 | Acer | negundo | ACERACEAE |
| E | 10 | Acer | pensylvanicum | ACERACEAE |
| * | 0 | **Acer** | **platanoides** | ACERACEAE |
| | 2 | Acer | rubrum | ACERACEAE |
| | 3 | Acer | saccharinum | ACERACEAE |
| | 6 | Acer | saccharum | ACERACEAE |
| | 8 | Acer | spicatum | ACERACEAE |
| * | 0 | **Achillea** | **millefolium** | ASTERACEAE |
| E | 10 | Aconitum | noveboracense | RANUNCULACEAE |
| | 4 | Acorus | calamus | ACORACEAE |
| | 7 | Actaea | alba (A. pachypoda) | RANUNCULACEAE |
| T | 9 | Actaea | rubra | RANUNCULACEAE |
| | 6 | Adiantum | pedatum | ADIANTACEAE |
| T | 8 | Adlumia | fungosa | FUMARIACEAE |
| * | 0 | **Aegilops** | **cylindrica** | POACEAE |
| * | 0 | **Aegopodium** | **podagraria** | APIACEAE |
| | 6 | Aesculus | glabra | HIPPOCASTANACEAE |
| * | 0 | **Aesculus** | **hippocastanum** | HIPPOCASTANACEAE |

| | | | | |
|---|---|---|---|---|
| * | 0 | **Aethusa** | **cynapium** | APIACEAE |
| E | 8 | Agalinis | auriculata (Tomanthera a.) | SCROPHULARIACEAE |
| E | 10 | Agalinis | purpurea var. parviflora | SCROPHULARIACEAE |
| | 8 | Agalinis | purpurea var. purpurea | SCROPHULARIACEAE |
| E | 10 | Agalinis | skinneriana | SCROPHULARIACEAE |
| | 5 | Agalinis | tenuifolia | SCROPHULARIACEAE |
| | 4 | Agastache | nepetoides | LAMIACEAE |
| | 4 | Agastache | scrophulariaefolia | LAMIACEAE |
| | 3 | Agrimonia | gryposepala | ROSACEAE |
| | 2 | Agrimonia | parviflora | ROSACEAE |
| | 5 | Agrimonia | pubescens | ROSACEAE |
| | 5 | Agrimonia | rostellata | ROSACEAE |
| | 7 | Agrimonia | striata | ROSACEAE |
| * | 0 | **Agrostemma** | **githago** | CARYOPHYLLACEAE |
| * | 0 | **Agrostis** | **capillaris (A. tenuis)** | POACEAE |
| * | 0 | **Agrostis** | **gigantea** | POACEAE |
| | 2 | Agrostis | hyemalis var. hyemalis | POACEAE |
| | 3 | Agrostis | hyemalis var. scabra | POACEAE |
| | 4 | Agrostis | perennans | POACEAE |
| * | 0 | **Ailanthus** | **altissima** | SIMAROUBACEAE |
| * | 0 | **Ajuga** | **reptans** | LAMIACEAE |
| * | 0 | **Alcea** | **rosea** | MALVACEAE |
| | 8 | Aletris | farinosa | LILIACEAE |
| | 2 | Alisma | subcordatum (A. plantago-aquatica) | ALISMATACEAE |
| | 8 | Alisma | triviale | ALISMATACEAE |
| * | 0 | **Alliaria** | **petiolata** | BRASSICACEAE |
| | 3 | Allium | canadense | LILIACEAE |
| | 5 | Allium | cernuum | LILIACEAE |
| * | 0 | **Allium** | **sativum** | LILIACEAE |
| * | 0 | **Allium** | **schoenoprasum** | LILIACEAE |
| | 5 | Allium | tricoccum | LILIACEAE |
| * | 0 | **Allium** | **vineale** | LILIACEAE |
| * | 0 | **Alnus** | **glutinosa** | BETULACEAE |
| | 6 | Alnus | incana (A. rugosa) | BETULACEAE |

| | | | | |
|---|---|---|---|---|
| | 6 | Alnus | serrulata | BETULACEAE |
| | 2 | Alopecurus | aequalis | POACEAE |
| | 0 | Alopecurus | carolinianus | POACEAE |
| * | 0 | **Alopecurus** | **pratensis** | POACEAE |
| * | 0 | **Althaea** | **officinalis** | MALVACEAE |
| * | 0 | **Alyssum** | **alyssoides** | BRASSICACEAE |
| | 0 | Amaranthus | albus | AMARANTHACEAE |
| * | 0 | **Amaranthus** | **blitoides** | AMARANTHACEAE |
| * | 0 | **Amaranthus** | **blitum (A. lividus)** | AMARANTHACEAE |
| * | 0 | **Amaranthus** | **hybridus** | AMARANTHACEAE |
| * | 0 | **Amaranthus** | **retroflexus** | AMARANTHACEAE |
| * | 0 | **Amaranthus** | **rudis (A. tamariscinus)** | AMARANTHACEAE |
| * | 0 | **Amaranthus** | **tuberculatus** | AMARANTHACEAE |
| | 0 | Ambrosia | artemisiifolia | ASTERACEAE |
| * | 0 | **Ambrosia** | **psilostachya** | ASTERACEAE |
| | 0 | Ambrosia | trifida | ASTERACEAE |
| | 5 | Amelanchier | arborea | ROSACEAE |
| | 10 | Amelanchier | laevis | ROSACEAE |
| T | 8 | Amelanchier | sanguinea | ROSACEAE |
| | 6 | Amelanchier | spicata | ROSACEAE |
| | 6 | Ammannia | robusta | LYTHRACEAE |
| T | 10 | Ammophila | breviligulata | POACEAE |
| | 2 | Amorpha | fruticosa | FABACEAE |
| | 3 | Ampelamus | albidus (Cynanchum laeve) | ASCLEPIADACEAE |
| * | 0 | **Ampelopsis** | **brevipedunculata** | VITACEAE |
| | 5 | Amphicarpaea | bracteata | FABACEAE |
| * | 0 | **Anagallis** | **arvensis** | PRIMULACEAE |
| | 6 | Anaphalis | margaritacea | ASTERACEAE |
| * | 0 | **Anchusa** | **arvensis (Lycopsis a.)** | BORAGINACEAE |
| * | 0 | **Anchusa** | **azurea** | BORAGINACEAE |
| X | 10 | Andromeda | glaucophylla | ERICACEAE |
| | 6 | Andropogon | gerardii | POACEAE |
| | 3 | Andropogon | virginicus | POACEAE |
| T | 10 | Androsace | occidentalis | PRIMULACEAE |

| | | | | |
|---|---|---|---|---|
| | 5 | Anemone | canadensis | RANUNCULACEAE |
| T | 9 | Anemone | cylindrica | RANUNCULACEAE |
| | 5 | Anemone | quinquefolia | RANUNCULACEAE |
| | 3 | Anemone | virginiana | RANUNCULACEAE |
| | 6 | Anemonella | thalictroides | RANUNCULACEAE |
| * | 0 | **Anethum** | **graveolens** | APIACEAE |
| | 6 | Angelica | atropurpurea | APIACEAE |
| | 8 | Angelica | venenosa | APIACEAE |
| * | 0 | **Anoda** | **cristata** | MALVACEAE |
| | 2 | Antennaria | neglecta var. neglecta | ASTERACEAE |
| | 2 | Antennaria | neglecta var. neodioica | ASTERACEAE |
| | 1 | Antennaria | plantaginifolia (A. parlinii) | ASTERACEAE |
| * | 0 | **Anthemis** | **arvensis** | ASTERACEAE |
| * | 0 | **Anthemis** | **cotula** | ASTERACEAE |
| * | 0 | **Anthemis** | **nobilis** | ASTERACEAE |
| * | 0 | **Anthemis** | **tinctoria** | ASTERACEAE |
| * | 0 | **Anthoxanthum** | **odoratum** | POACEAE |
| * | 0 | **Anthriscus** | **caucalis** | APIACEAE |
| * | 0 | **Anthriscus** | **sylvestris** | APIACEAE |
| * | 0 | **Antirrhinum** | **majus** | SCROPHULARIACEAE |
| * | 0 | **Apera** | **spica-venti** | POACEAE |
| | 4 | Apios | americana | FABACEAE |
| | 8 | Aplectrum | hyemale | ORCHIDACEAE |
| | 6 | Apocynum | androsaemifolium | APOCYNACEAE |
| | 3 | Apocynum | cannabinum | APOCYNACEAE |
| E | 8 | Apocynum | sibiricum | APOCYNACEAE |
| | 3 | Apocynum | x floribundum (A. medium) | APOCYNACEAE |
| | 5 | Aquilegia | canadensis | RANUNCULACEAE |
| * | 0 | **Aquilegia** | **vulgaris** | RANUNCULACEAE |
| * | 0 | **Arabidopsis** | **thaliana** | BRASSICACEAE |
| | 7 | Arabis | canadensis | BRASSICACEAE |
| E | 10 | Arabis | divaricarpa | BRASSICACEAE |
| E | 9 | Arabis | drummondii | BRASSICACEAE |
| | 3 | Arabis | glabra | BRASSICACEAE |

| | | | | |
|---|---|---|---|---|
| | 4 | Arabis | hirsuta | BRASSICACEAE |
| | 4 | Arabis | laevigata | BRASSICACEAE |
| | 6 | Arabis | lyrata | BRASSICACEAE |
| | 4 | Arabis | perstellata | BRASSICACEAE |
| E | 10 | Aralia | hispida | ARALIACEAE |
| | 5 | Aralia | nudicaulis | ARALIACEAE |
| | 8 | Aralia | racemosa | ARALIACEAE |
| ** | 0 | Aralia | spinosa | ARALIACEAE |
| * | 0 | **Arctium** | **lappa** | ASTERACEAE |
| * | 0 | **Arctium** | **minus** | ASTERACEAE |
| X | 10 | Arctostaphylos | uva-ursi | ERICACEAE |
| T | 8 | Arenaria | lateriflora | CARYOPHYLLACEAE |
| * | 0 | **Arenaria** | **serpyllifolia** | CARYOPHYLLACEAE |
| | 10 | Arenaria | stricta | CARYOPHYLLACEAE |
| E | 10 | Arethusa | bulbosa | ORCHIDACEAE |
| * | 0 | **Argemone** | **mexicana** | PAPAVERACEAE |
| | 5 | Arisaema | dracontium | ARACEAE |
| | 9 | Arisaema | triphyllum var. stewardsonii (A. stewardsonii) | ARACEAE |
| | 4 | Arisaema | triphyllum var. triphyllum (A. atrorubens) | ARACEAE |
| | 2 | Aristida | dichotoma | POACEAE |
| E | 10 | Aristida | longespica | POACEAE |
| | 0 | Aristida | oligantha | POACEAE |
| | 8 | Aristida | purpurascens | POACEAE |
| | 7 | Aristolochia | serpentaria | ARISTOLOCHIACEAE |
| E | 8 | Armoracia | lacustris (A. aquatica) | BRASSICACEAE |
| * | 0 | **Armoracia** | **rusticana** | BRASSICACEAE |
| | 5 | Aronia | melanocarpa (A. prunifolia) | ROSACEAE |
| * | 0 | **Arrhenatherum** | **elatius** | POACEAE |
| * | 0 | **Artemisia** | **absinthium** | ASTERACEAE |
| * | 0 | **Artemisia** | **annua** | ASTERACEAE |
| * | 0 | **Artemisia** | **biennis** | ASTERACEAE |
| T | 10 | Artemisia | campestris ssp. caudata | ASTERACEAE |
| * | 0 | **Artemisia** | **ludoviciana** | ASTERACEAE |
| * | 0 | **Artemisia** | **pontica** | ASTERACEAE |

| | | | | |
|---|---|---|---|---|
| * | 0 | **Artemisia** | **vulgaris** | ASTERACEAE |
| | 8 | Aruncus | dioicus | ROSACEAE |
| * | 0 | **Arundinaria** | **gigantea** | POACEAE |
| | 7 | Asarum | canadense | ARISTOLOCHIACEAE |
| | 7 | Asclepias | amplexicaulis | ASCLEPIADACEAE |
| | 8 | Asclepias | exaltata | ASCLEPIADACEAE |
| | 8 | Asclepias | hirtella | ASCLEPIADACEAE |
| | 5 | Asclepias | incarnata | ASCLEPIADACEAE |
| | 8 | Asclepias | purpurascens | ASCLEPIADACEAE |
| | 7 | Asclepias | quadrifolia | ASCLEPIADACEAE |
| | 0 | Asclepias | syriaca | ASCLEPIADACEAE |
| | 9 | Asclepias | sullivantii | ASCLEPIADACEAE |
| | 6 | Asclepias | tuberosa | ASCLEPIADACEAE |
| | 10 | Asclepias | variegata | ASCLEPIADACEAE |
| | 6 | Asclepias | verticillata | ASCLEPIADACEAE |
| | 7 | Asclepias | viridiflora | ASCLEPIADACEAE |
| | 6 | Asimina | triloba | ANNONACEAE |
| * | 0 | **Asparagus** | **officinalis** | LILIACEAE |
| | 8 | Asplenium | montanum | ASPLENIACEAE |
| | 8 | Asplenium | pinnatifidum | ASPLENIACEAE |
| | 5 | Asplenium | platyneuron | ASPLENIACEAE |
| | 8 | Asplenium | rhizophyllus (Camptosorus r.) | ASPLENIACEAE |
| | 8 | Asplenium | trichomanes | ASPLENIACEAE |
| E | 10 | Aster | acuminatus | ASTERACEAE |
| | 9 | Aster | borealis (A. junciformis) | ASTERACEAE |
| * | 0 | **Aster** | **brachyactis** | ASTERACEAE |
| | 5 | Aster | cordifolius | ASTERACEAE |
| | 5 | Aster | divaricatus | ASTERACEAE |
| T | 8 | Aster | drummondii | ASTERACEAE |
| E | 10 | Aster | dumosus | ASTERACEAE |
| | 3 | Aster | ericoides | ASTERACEAE |
| | 8 | Aster | infirmus | ASTERACEAE |
| | 6 | Aster | laevis | ASTERACEAE |
| | 2 | Aster | lanceolatus (A. simplex) | ASTERACEAE |

| | | | | |
|---|---|---|---|---|
| | 2 | Aster | lateriflorus | ASTERACEAE |
| | 6 | Aster | lowrieanus | ASTERACEAE |
| | 5 | Aster | macrophyllus | ASTERACEAE |
| | 3 | Aster | novae-angliae | ASTERACEAE |
| | 7 | Aster | oolentangiensis (A. azureus) | ASTERACEAE |
| | 9 | Aster | patens var. patens | ASTERACEAE |
| | 5 | Aster | patens var. phlogifolius | ASTERACEAE |
| | 3 | Aster | paternus | ASTERACEAE |
| | 1 | Aster | pilosus var. pilosus | ASTERACEAE |
| | 3 | Aster | pilosus var. pringlei | ASTERACEAE |
| | 7 | Aster | praealtus | ASTERACEAE |
| | 3 | Aster | prenanthoides | ASTERACEAE |
| | 6 | Aster | puniceus | ASTERACEAE |
| | 2 | Aster | racemosus (A. vimineus) | ASTERACEAE |
| | 3 | Aster | sagittifolius | ASTERACEAE |
| | 5 | Aster | schreberi | ASTERACEAE |
| | 4 | Aster | shortii | ASTERACEAE |
| * | 0 | **Aster** | **subulatus** | ASTERACEAE |
| | 2 | Aster | umbellatus | ASTERACEAE |
| | 2 | Aster | undulatus | ASTERACEAE |
| | 3 | Astragalus | canadensis | FABACEAE |
| E | 10 | Astragalus | neglectus | FABACEAE |
| | 5 | Athyrium | felix-femina | ASPLENIACEAE |
| | 8 | Athyrium | pycnocarpon | ASPLENIACEAE |
| | 6 | Athyrium | thelypteroides | ASPLENIACEAE |
| * | 0 | **Atriplex** | **argentea** | CHENOPODIACEAE |
| * | 0 | **Atriplex** | **littoralis (A. subspicata)** | CHENOPODIACEAE |
| | 0 | Atriplex | patula | CHENOPODIACEAE |
| * | 0 | **Atriplex** | **rosea** | CHENOPODIACEAE |
| | 9 | Aureolaria | flava | SCROPHULARIACEAE |
| E | 10 | Aureolaria | pedicularia var. ambigens | SCROPHULARIACEAE |
| | 9 | Aureolaria | virginica | SCROPHULARIACEAE |
| * | 0 | **Avena** | **fatua** | POACEAE |
| * | 0 | **Avena** | **sativa** | POACEAE |

| | | | | |
|---|---|---|---|---|
| * | 0 | **Azolla** | **caroliniana** | SALVINIACEAE |
| T | 8 | Baptisia | lactea | FABACEAE |
| | 8 | Baptisia | tinctoria | FABACEAE |
| * | 0 | **Barbarea** | **verna** | BRASSICACEAE |
| * | 0 | **Barbarea** | **vulgaris** | BRASSICACEAE |
| | 6 | Bartonia | virginica | GENTIANACEAE |
| * | 0 | **Bellis** | **perennis** | ASTERACEAE |
| * | 0 | **Berberis** | **thunbergii** | BERBERIDACEAE |
| * | 0 | **Berberis** | **vulgaris** | BERBERIDACEAE |
| * | 0 | **Berteroa** | **incana** | BRASSICACEAE |
| | 7 | Betula | alleghaniensis | BETULACEAE |
| | 7 | Betula | lenta | BETULACEAE |
| * | 0 | **Betula** | **papyrifera** | BETULACEAE |
| * | 0 | **Betula** | **pendula** | BETULACEAE |
| | 6 | Betula | populifolia | BETULACEAE |
| T | 10 | Betula | pumila | BETULACEAE |
| * | 0 | **Betula** | **x purpusii** | BETULACEAE |
| | 3 | Bidens | aristosa | ASTERACEAE |
| X | 10 | Bidens | beckii (Megalodonta b.) | ASTERACEAE |
| | 3 | Bidens | bipinnata | ASTERACEAE |
| | 3 | Bidens | cernua | ASTERACEAE |
| | 2 | Bidens | connata (B. tripartita) | ASTERACEAE |
| | 3 | Bidens | coronata | ASTERACEAE |
| | 7 | Bidens | discoidea | ASTERACEAE |
| | 2 | Bidens | frondosa | ASTERACEAE |
| | 6 | Bidens | polylepis | ASTERACEAE |
| | 2 | Bidens | vulgata | ASTERACEAE |
| | 4 | Blephilia | ciliata | LAMIACEAE |
| | 4 | Blephilia | hirsuta | LAMIACEAE |
| | 4 | Boehmeria | cylindrica | URTICACEAE |
| | 8 | Boltonia | asteroides | ASTERACEAE |
| * | 0 | **Borago** | **officinalis** | BORAGINACEAE |
| | 5 | Botrychium | dissectum | OPHIOGLOSSACEAE |
| X | 10 | Botrychium | lanceolatum | OPHIOGLOSSACEAE |

| | | | | |
|---|---|---|---|---|
| | 5 | Botrychium | matricariifolium | OPHIOGLOSSACEAE |
| T | 10 | Botrychium | multifidum | OPHIOGLOSSACEAE |
| | 7 | Botrychium | oneidense | OPHIOGLOSSACEAE |
| X | 10 | Botrychium | simplex | OPHIOGLOSSACEAE |
| | 5 | Botrychium | virginianum | OPHIOGLOSSACEAE |
| | 7 | Bouteloua | curtipendula | POACEAE |
| | 6 | Brachyelytrum | erectum | POACEAE |
| | 8 | Brasenia | schreberi | CABOMBACEAE |
| * | 0 | **Brassica** | **juncea** | BRASSICACEAE |
| * | 0 | **Brassica** | **napus** | BRASSICACEAE |
| * | 0 | **Brassica** | **nigra** | BRASSICACEAE |
| * | 0 | **Brassica** | **oleracea** | BRASSICACEAE |
| * | 0 | **Brassica** | **rapa** | BRASSICACEAE |
| | 7 | Bromus | altissimus (B. latiglumis) | POACEAE |
| | 7 | Bromus | ciliatus | POACEAE |
| * | 0 | **Bromus** | **commutatus** | POACEAE |
| * | 0 | **Bromus** | **hordeaceus (B. mollis)** | POACEAE |
| * | 0 | **Bromus** | **inermis** | POACEAE |
| * | 0 | **Bromus** | **japonicus** | POACEAE |
| | 8 | Bromus | kalmii | POACEAE |
| | 4 | Bromus | pubescens | POACEAE |
| * | 0 | **Bromus** | **secalinus** | POACEAE |
| * | 0 | **Bromus** | **sterilis** | POACEAE |
| * | 0 | **Bromus** | **tectorum** | POACEAE |
| E | 8 | Buchnera | americana | SCROPHULARIACEAE |
| | 3 | Bulbostylis | capillaris | CYPERACEAE |
| * | 0 | **Bunias** | **orientalis** | BRASSICACEAE |
| * | 0 | **Buxus** | **sempervirens** | BUXACEAE |
| * | 0 | **Cabomba** | **caroliniana** | CABOMBACEAE |
| | 7 | Cacalia | atriplicifolia | ASTERACEAE |
| | 7 | Cacalia | suaveolens | ASTERACEAE |
| | 10 | Cakile | edentula | BRASSICACEAE |
| | 4 | Calamagrostis | canadensis | POACEAE |
| | 10 | Calamagrostis | stricta (C. inexpansa) | POACEAE |

| | | | | |
|---|---|---|---|---|
| | 10 | Calla | palustris | ARACEAE |
| | 3 | Callitriche | heterophylla | CALLITRICHACEAE |
| T | 10 | Callitriche | palustris | CALLITRICHACEAE |
| | 8 | Callitriche | terrestris | CALLITRICHACEAE |
| | 10 | Calopogon | tuberosus | ORCHIDACEAE |
| | 5 | Caltha | palustris | RANUNCULACEAE |
| * | 0 | **Calystegia** | **hederacea** | CONVOLVULACEAE |
| | 1 | Calystegia | sepium | CONVOLVULACEAE |
| | 6 | Calystegia | spithamaea | CONVOLVULACEAE |
| | 5 | Camassia | scilloides | LILIACEAE |
| * | 0 | **Camelina** | **microcarpa** | BRASSICACEAE |
| * | 0 | **Camelina** | **sativa** | BRASSICACEAE |
| | 4 | Campanula | americana | CAMPANULACEAE |
| | 7 | Campanula | aparinoides var. grandiflora | CAMPANULACEAE |
| * | 0 | **Campanula** | **rapunculoides** | CAMPANULACEAE |
| T | 8 | Campanula | rotundifolia | CAMPANULACEAE |
| ** | 0 | Campsis | radicans | BIGNONIACEAE |
| * | 0 | **Cannabis** | **sativa** | CANNABACEAE |
| * | 0 | **Capsella** | **bursa-pastoris** | BRASSICACEAE |
| | 8 | Cardamine | angustata (Dentaria heterophylla) | BRASSICACEAE |
| | 4 | Cardamine | bulbosa | BRASSICACEAE |
| | 3 | Cardamine | concatenata (Dentaria laciniata) | BRASSICACEAE |
| | 4 | Cardamine | diphylla (Dentaria d.) | BRASSICACEAE |
| | 5 | Cardamine | douglassii | BRASSICACEAE |
| * | 0 | **Cardamine** | **hirsuta** | BRASSICACEAE |
| * | 0 | **Cardamine** | **impatiens** | BRASSICACEAE |
| | 3 | Cardamine | parviflora var. arenicola | BRASSICACEAE |
| | 3 | Cardamine | pensylvanica | BRASSICACEAE |
| | 9 | Cardamine | pratensis var. palustris | BRASSICACEAE |
| * | 0 | **Cardamine** | **pratensis var. pratensis** | BRASSICACEAE |
| | 8 | Cardamine | rotundifolia | BRASSICACEAE |
| * | 0 | **Cardaria** | **draba** | BRASSICACEAE |
| * | 0 | **Carduus** | **acanthoides** | ASTERACEAE |
| * | 0 | **Carduus** | **nutans** | ASTERACEAE |

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|---|---|---|---|---|
| | 8 | Carex | alata | CYPERACEAE |
| | 3 | Carex | albicans var. albicans (C. artitecta) | CYPERACEAE |
| T | 8 | Carex | albicans var. emmonsii | CYPERACEAE |
| T | 8 | Carex | albolutescens | CYPERACEAE |
| | 4 | Carex | albursina | CYPERACEAE |
| | 3 | Carex | amphibola var. turgida | CYPERACEAE |
| T | 9 | Carex | aquatilis | CYPERACEAE |
| E | 10 | Carex | arctata | CYPERACEAE |
| T | 7 | Carex | argyrantha | CYPERACEAE |
| E | 9 | Carex | atherodes | CYPERACEAE |
| | 8 | Carex | atlantica var. atlantica | CYPERACEAE |
| | 9 | Carex | atlantica var. capillacea (C. howei) | CYPERACEAE |
| | 9 | Carex | aurea | CYPERACEAE |
| T | 7 | Carex | bebbii | CYPERACEAE |
| | 3 | Carex | blanda | CYPERACEAE |
| | 4 | Carex | brevior (incl. C. molesta) | CYPERACEAE |
| | 5 | Carex | bromoides | CYPERACEAE |
| T | 9 | Carex | brunnescens | CYPERACEAE |
| | 10 | Carex | buxbaumii | CYPERACEAE |
| | 8 | Carex | canescens | CYPERACEAE |
| | 5 | Carex | careyana | CYPERACEAE |
| | 6 | Carex | caroliniana | CYPERACEAE |
| | 5 | Carex | cephalophora | CYPERACEAE |
| | 3 | Carex | communis | CYPERACEAE |
| | 2 | Carex | comosa | CYPERACEAE |
| | 2 | Carex | complanata (C. hirsutella) | CYPERACEAE |
| | 5 | Carex | conjuncta | CYPERACEAE |
| T | 8 | Carex | conoidea | CYPERACEAE |
| | 5 | Carex | convoluta | CYPERACEAE |
| | 8 | Carex | crawei | CYPERACEAE |
| | 2 | Carex | crinita | CYPERACEAE |
| | 3 | Carex | cristatella | CYPERACEAE |
| E | 10 | Carex | crus-corvi | CYPERACEAE |
| | 9 | Carex | cryptolepis | CYPERACEAE |

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|---|---|---|---|---|
| | 6 | Carex | davisii | CYPERACEAE |
| | 8 | Carex | debilis var. rudgei | CYPERACEAE |
| E | 10 | Carex | decomposita | CYPERACEAE |
| X | 10 | Carex | deweyana | CYPERACEAE |
| | 9 | Carex | diandra | CYPERACEAE |
| | 4 | Carex | digitalis | CYPERACEAE |
| E | 10 | Carex | disperma | CYPERACEAE |
| | 10 | Carex | eburnea | CYPERACEAE |
| E | 10 | Carex | echinata (C. cephalantha) | CYPERACEAE |
| | 6 | Carex | emoryi | CYPERACEAE |
| | 6 | Carex | festucacea | CYPERACEAE |
| | 10 | Carex | flaccosperma (C. glaucodea) | CYPERACEAE |
| | 10 | Carex | flava | CYPERACEAE |
| | 7 | Carex | folliculata | CYPERACEAE |
| X | 10 | Carex | formosa | CYPERACEAE |
| | 5 | Carex | frankii | CYPERACEAE |
| | 3 | Carex | gracilescens | CYPERACEAE |
| | 4 | Carex | gracillima | CYPERACEAE |
| | 3 | Carex | granularis | CYPERACEAE |
| | 5 | Carex | grayi | CYPERACEAE |
| X | 10 | Carex | haydenii | CYPERACEAE |
| | 3 | Carex | hirtifolia | CYPERACEAE |
| | 7 | Carex | hitchcockiana | CYPERACEAE |
| | 8 | Carex | hyalinolepis | CYPERACEAE |
| | 4 | Carex | hystericina | CYPERACEAE |
| | 8 | Carex | interior | CYPERACEAE |
| | 5 | Carex | intumescens | CYPERACEAE |
| | 7 | Carex | jamesii | CYPERACEAE |
| | 5 | Carex | lacustris | CYPERACEAE |
| | 5 | Carex | laevivaginata | CYPERACEAE |
| T | 10 | Carex | lasiocarpa | CYPERACEAE |
| | 3 | Carex | laxiculmis | CYPERACEAE |
| | 3 | Carex | laxiflora | CYPERACEAE |
| | 6 | Carex | leavenworthii | CYPERACEAE |

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| | 5 | Carex | leptalea | CYPERACEAE |
| | 6 | Carex | leptonervia | CYPERACEAE |
| E | 10 | Carex | limosa | CYPERACEAE |
| E | 10 | Carex | longii | CYPERACEAE |
| X | 10 | Carex | louisianica | CYPERACEAE |
| T | 10 | Carex | lupuliformis | CYPERACEAE |
| | 3 | Carex | lupulina | CYPERACEAE |
| | 3 | Carex | lurida | CYPERACEAE |
| | 7 | Carex | meadii | CYPERACEAE |
| | 6 | Carex | muhlenbergii | CYPERACEAE |
| | 8 | Carex | muskingumensis | CYPERACEAE |
| | 4 | Carex | normalis | CYPERACEAE |
| | 8 | Carex | oligocarpa | CYPERACEAE |
| T | 10 | Carex | oligosperma | CYPERACEAE |
| T | 10 | Carex | pallescens | CYPERACEAE |
| | 7 | Carex | pedunculata | CYPERACEAE |
| | 6 | Carex | pellita (C. lanuginosa) | CYPERACEAE |
| | 3 | Carex | pensylvanica | CYPERACEAE |
| | 8 | Carex | plantaginea | CYPERACEAE |
| | 7 | Carex | platyphylla | CYPERACEAE |
| * | 0 | **Carex** | **praegracilis** | CYPERACEAE |
| | 9 | Carex | prairea | CYPERACEAE |
| | 8 | Carex | prasina | CYPERACEAE |
| T | 8 | Carex | projecta | CYPERACEAE |
| T | 8 | Carex | radiata | CYPERACEAE |
| T | 8 | Carex | retroflexa | CYPERACEAE |
| E | 9 | Carex | retrorsa | CYPERACEAE |
| X | 10 | Carex | richardsonii | CYPERACEAE |
| | 3 | Carex | rosea | CYPERACEAE |
| | 9 | Carex | rugosperma | CYPERACEAE |
| T | 9 | Carex | sartwellii | CYPERACEAE |
| | 7 | Carex | scabrata | CYPERACEAE |
| | 4 | Carex | scoparia | CYPERACEAE |
| | 9 | Carex | seorsa | CYPERACEAE |

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| | 5 | Carex | shortiana | CYPERACEAE |
| | 9 | Carex | siccata (C. foenea) | CYPERACEAE |
| | 2 | Carex | sparganioides var. aggregata | CYPERACEAE |
| | 3 | Carex | sparganioides var. sparganioides | CYPERACEAE |
| E | 8 | Carex | sparganoides var. cephaloidea | CYPERACEAE |
| E | 10 | Carex | sprengelii | CYPERACEAE |
| | 5 | Carex | squarrosa | CYPERACEAE |
| | 8 | Carex | sterilis | CYPERACEAE |
| | 2 | Carex | stipata | CYPERACEAE |
| T | 9 | Carex | straminea | CYPERACEAE |
| | 6 | Carex | stricta | CYPERACEAE |
| | 9 | Carex | suberecta | CYPERACEAE |
| | 4 | Carex | swanii | CYPERACEAE |
| | 6 | Carex | tenera | CYPERACEAE |
| X | 10 | Carex | tenuiflora | CYPERACEAE |
| | 8 | Carex | tetanica | CYPERACEAE |
| | 6 | Carex | torta | CYPERACEAE |
| | 4 | Carex | tribuloides | CYPERACEAE |
| | 9 | Carex | trichocarpa | CYPERACEAE |
| | 9 | Carex | trisperma | CYPERACEAE |
| | 8 | Carex | tuckermanii | CYPERACEAE |
| | 6 | Carex | typhina | CYPERACEAE |
| | 9 | Carex | umbellata | CYPERACEAE |
| | 7 | Carex | utriculata (C. rostrata) | CYPERACEAE |
| | 7 | Carex | vesicaria | CYPERACEAE |
| | 6 | Carex | virescens | CYPERACEAE |
| | 10 | Carex | viridula | CYPERACEAE |
| | 6 | Carex | vulpinoidea var. ambigua (C. annectens) | CYPERACEAE |
| | 3 | Carex | vulpinoidea var. vulpinoidea | CYPERACEAE |
| | 7 | Carex | willdenowii | CYPERACEAE |
| | 7 | Carex | woodii | CYPERACEAE |
| | 4 | Carpinus | caroliniana | BETULACEAE |
| * | 0 | **Carum** | **carvi** | APIACEAE |
| | 4 | Carya | cordiformis | JUGLANDACEAE |

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| | 5 | Carya | glabra | JUGLANDACEAE |
| | 7 | Carya | laciniosa | JUGLANDACEAE |
| | 5 | Carya | ovalis | JUGLANDACEAE |
| | 6 | Carya | ovata | JUGLANDACEAE |
| | 6 | Carya | tomentosa | JUGLANDACEAE |
| | 6 | Castanea | dentata | FAGACEAE |
| | 8 | Castilleja | coccinea | SCROPHULARIACEAE |
| * | 0 | **Catalpa** | **bignonioides** | BIGNONIACEAE |
| * | 0 | **Catalpa** | **ovata** | BIGNONIACEAE |
| * | 0 | **Catalpa** | **speciosa** | BIGNONIACEAE |
| | 6 | Caulophyllum | thalictroides var. giganteum | BERBERIDACEAE |
| | 6 | Caulophyllum | thalictroides var. thalictroides | BERBERIDACEAE |
| | 6 | Ceanothus | americanus | RHAMNACEAE |
| E | 10 | Ceanothus | herbaceus | RHAMNACEAE |
| | 3 | Celastrus | scandens | CELASTRACEAE |
| | 6 | Celtis | occidentalis | ULMACEAE |
| | 8 | Celtis | tenuifolia | ULMACEAE |
| | 3 | Cenchrus | longispinus | POACEAE |
| * | 0 | **Centaurea** | **cyanus** | ASTERACEAE |
| * | 0 | **Centaurea** | **dubia** | ASTERACEAE |
| * | 0 | **Centaurea** | **jacea** | ASTERACEAE |
| * | 0 | **Centaurea** | **maculosa** | ASTERACEAE |
| * | 0 | **Centaurea** | **nigra** | ASTERACEAE |
| * | 0 | **Centaurea** | **solstitialis** | ASTERACEAE |
| * | 0 | **Centaurium** | **pulchellum** | GENTIANACEAE |
| * | 0 | **Centunculus** | **minimus** | PRIMULACEAE |
| | 7 | Cephanlanthus | occidentalis | RUBIACEAE |
| | 2 | Cerastium | arvense | CARYOPHYLLACEAE |
| * | 0 | **Cerastium** | **conglomeratum** | CARYOPHYLLACEAE |
| | 4 | Cerastium | nutans | CARYOPHYLLACEAE |
| * | 0 | **Cerastium** | **tomentosum** | CARYOPHYLLACEAE |
| * | 0 | **Cerastium** | **viscosum** | CARYOPHYLLACEAE |
| * | 0 | **Cerastium** | **vulgatum (C. fontanum)** | CARYOPHYLLACEAE |
| | 5 | Ceratophyllum | demersum | CERATOPHYLLACEAE |

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| | 7 | Ceratophyllum | echinatum | CERATOPHYLLACEAE |
| ** | 0 | Cercis | canadensis | CAESALPINIACEAE |
| * | 0 | **Chaenomeles** | **lagenaria** | ROSACEAE |
| * | 0 | **Chaenorrhinum** | **minus** | SCROPHULARIACEAE |
| | 4 | Chaerophyllum | procumbens var. procumbens | APIACEAE |
| | 8 | Chaerophyllum | procumbens var. shortii | APIACEAE |
| | 3 | Chamaecrista | fasciculata (Cassia chamaecrista) | CAESALPINIACEAE |
| | 10 | Chamaedaphne | calyculata | ERICACEAE |
| | 8 | Chamaelirium | luteum | LILIACEAE |
| * | 0 | **Chelidonium** | **majus** | PAPAVERACEAE |
| | 8 | Chelone | glabra | SCROPHULARIACEAE |
| * | 0 | **Chenopodium** | **album** | CHENOPODIACEAE |
| * | 0 | **Chenopodium** | **ambrosioides** | CHENOPODIACEAE |
| * | 0 | **Chenopodium** | **botrys** | CHENOPODIACEAE |
| | 10 | Chenopodium | capitatum | CHENOPODIACEAE |
| | 3 | Chenopodium | gigantospermum (C. hybridum) | CHENOPODIACEAE |
| * | 0 | **Chenopodium** | **glaucum** | CHENOPODIACEAE |
| E | 8 | Chenopodium | leptophyllum | CHENOPODIACEAE |
| * | 0 | **Chenopodium** | **murale** | CHENOPODIACEAE |
| | 6 | Chenopodium | standleyanum | CHENOPODIACEAE |
| * | 0 | **Chenopodium** | **urbicum** | CHENOPODIACEAE |
| * | 0 | **Chenopodium** | **vulvaria** | CHENOPODIACEAE |
| | 7 | Chimaphila | maculata | PYROLACEAE |
| T | 9 | Chimaphila | umbellata | PYROLACEAE |
| * | 0 | **Chorispora** | **tenella** | BRASSICACEAE |
| * | 0 | **Chrysanthemum** | **balsamita** | ASTERACEAE |
| * | 0 | **Chrysanthemum** | **leucanthemum** | ASTERACEAE |
| * | 0 | **Chrysanthemum** | **maximum** | ASTERACEAE |
| * | 0 | **Chrysanthemum** | **parthenium** | ASTERACEAE |
| T | 6 | Chrysogonum | virginianum | ASTERACEAE |
| * | 0 | **Chrysopsis** | **camporum** | ASTERACEAE |
| | 6 | Chrysosplenium | americanum | SAXIFRAGACEAE |
| * | 0 | **Cichorium** | **intybus** | ASTERACEAE |
| | 4 | Cicuta | bulbifera | APIACEAE |

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| | 3 | Cicuta | maculata | APIACEAE |
| | 8 | Cimicifuga | racemosa | RANUNCULACEAE |
| | 4 | Cinna | arundinacea | POACEAE |
| E | 9 | Cinna | latifolia | POACEAE |
| | 9 | Circaea | alpina | ONAGRACEAE |
| | 3 | Circaea | lutetiana | ONAGRACEAE |
| | 5 | Circaea | x intermedia | ONAGRACEAE |
| | 5 | Cirsium | altissimum | ASTERACEAE |
| * | 0 | **Cirsium** | **arvense** | ASTERACEAE |
| | 6 | Cirsium | discolor | ASTERACEAE |
| | 8 | Cirsium | muticum | ASTERACEAE |
| * | 0 | **Cirsium** | **plattense** | ASTERACEAE |
| | 8 | Cirsium | pumilum | ASTERACEAE |
| * | 0 | **Cirsium** | **vulgare** | ASTERACEAE |
| * | 0 | **Citrullus** | **lanatus** | CUCURBITACEAE |
| | 10 | Cladium | mariscoides | CYPERACEAE |
| | 8 | Claytonia | caroliniana | PORTULACACEAE |
| | 3 | Claytonia | virginica | PORTULACACEAE |
| * | 0 | **Clematis** | **terniflora (C. dioscoreifolia)** | RANUNCULACEAE |
| | 3 | Clematis | virginiana | RANUNCULACEAE |
| * | 0 | **Cleome** | **hassleriana** | CAPPARACEAE |
| E | 10 | Clintonia | borealis | LILIACEAE |
| T | 8 | Clintonia | umbellulata | LILIACEAE |
| | 6 | Collinsia | verna | SCROPHULARIACEAE |
| | 5 | Collinsonia | canadensis | LAMIACEAE |
| | 7 | Comandra | umbellata | SANTALACEAE |
| * | 0 | **Commelina** | **communis** | COMMELINACEAE |
| * | 0 | **Commelina** | **diffusa** | COMMELINACEAE |
| T | 8 | Comptonia | peregrina | MYRICACEAE |
| | 10 | Conioselinum | chinense | APIACEAE |
| * | 0 | **Conium** | **maculatum** | APIACEAE |
| | 7 | Conopholis | americana | OROBANCHACEAE |
| * | 0 | **Conringia** | **orientalis** | BRASSICACEAE |
| * | 0 | **Convallaria** | **majalis** | LILIACEAE |

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| * | 0 | **Convolvulus** | **arvensis** | CONVOLVULACEAE |
| | 0 | Conyza | canadensis | ASTERACEAE |
| E | 7 | Conyza | ramosissima | ASTERACEAE |
| | 10 | Coptis | trifolia | RANUNCULACEAE |
| | 7 | Corallorhiza | maculata | ORCHIDACEAE |
| | 5 | Corallorhiza | odontorhiza | ORCHIDACEAE |
| E | 9 | Corallorhiza | trifida | ORCHIDACEAE |
| * | 0 | **Coreopsis** | **grandiflora** | ASTERACEAE |
| * | 0 | **Coreopsis** | **lanceolata** | ASTERACEAE |
| * | 0 | **Coreopsis** | **tinctoria** | ASTERACEAE |
| | 7 | Coreopsis | tripteris | ASTERACEAE |
| * | 0 | **Corispermum** | **hyssopifolium** | CHENOPODIACEAE |
| * | 0 | **Corispermum** | **nitidum** | CHENOPODIACEAE |
| | 5 | Cornus | alternifolia | CORNACEAE |
| | 2 | Cornus | amomum | CORNACEAE |
| T | 9 | Cornus | canadensis | CORNACEAE |
| | 4 | Cornus | drummondii | CORNACEAE |
| | 5 | Cornus | florida | CORNACEAE |
| | 2 | Cornus | racemosa | CORNACEAE |
| | 7 | Cornus | rugosa | CORNACEAE |
| | 4 | Cornus | sericea (C. stolonifera) | CORNACEAE |
| * | 0 | **Coronilla** | **varia** | FABACEAE |
| | 7 | Corydalis | flavula | FUMARIACEAE |
| | 9 | Corydalis | sempervirens | FUMARIACEAE |
| | 5 | Corylus | americana | BETULACEAE |
| X | 10 | Corylus | cornuta | BETULACEAE |
| * | 0 | **Cosmos** | **bipinnatus** | ASTERACEAE |
| * | 0 | **Cotinus** | **coggygria** | ANACARDIACEAE |
| X | 10 | Crataegus | brainerdii | ROSACEAE |
| | 6 | Crataegus | calpodendron | ROSACEAE |
| | 7 | Crataegus | chrysocarpa (C. rotundifolia) | ROSACEAE |
| | 4 | Crataegus | coccinea | ROSACEAE |
| | 3 | Crataegus | crus-galli | ROSACEAE |
| | 3 | Crataegus | flabellata | ROSACEAE |

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| | 7 | Crataegus | intricata | ROSACEAE |
| | 3 | Crataegus | mollis | ROSACEAE |
| * | 0 | **Crataegus** | **monogyna** | ROSACEAE |
| | 2 | Crataegus | pruinosa | ROSACEAE |
| | 3 | Crataegus | punctata | ROSACEAE |
| | 4 | Crataegus | succulenta | ROSACEAE |
| * | 0 | **Crepis** | **capillaris** | ASTERACEAE |
| * | 0 | **Crepis** | **pulchra** | ASTERACEAE |
| * | 0 | **Crepis** | **tectorum** | ASTERACEAE |
| * | 0 | **Croton** | **glandulosus** | EUPHORBIACEAE |
| * | 0 | **Croton** | **monanthogynus** | EUPHORBIACEAE |
| | 3 | Cryptotaenia | canadensis | APIACEAE |
| | 6 | Cuphea | viscosissima | LYTHRACEAE |
| | 9 | Cuscuta | cephalanthi | CUSCUTACEAE |
| E | 8 | Cuscuta | coryli | CUSCUTACEAE |
| * | 0 | **Cuscuta** | **epilinum** | CUSCUTACEAE |
| * | 0 | **Cuscuta** | **epithymum** | CUSCUTACEAE |
| | 3 | Cuscuta | gronovii | CUSCUTACEAE |
| | 5 | Cuscuta | pentagona (incl. C. campestre) | CUSCUTACEAE |
| | 7 | Cuscuta | polygonorum | CUSCUTACEAE |
| * | 0 | **Cycloloma** | **atriplicfolium** | CHENOPODIACEAE |
| * | 0 | **Cymbalaria** | **muralis** | SCROPHULARIACEAE |
| * | 0 | **Cynodon** | **dactylon** | POACEAE |
| * | 0 | **Cynoglossum** | **officinale** | BORAGINACEAE |
| X | 10 | Cynoglossum | virginianum var. boreale | BORAGINACEAE |
| | 7 | Cynoglossum | virginianum var. virginianum | BORAGINACEAE |
| * | 0 | **Cynosurus** | **cristatus** | POACEAE |
| * | 0 | **Cynosurus** | **echinatus** | POACEAE |
| E | 10 | Cyperus | acuminatus | CYPERACEAE |
| | 3 | Cyperus | bipartitus (C. rivularis) | CYPERACEAE |
| | 8 | Cyperus | diandrus | CYPERACEAE |
| | 4 | Cyperus | erythrorhizos | CYPERACEAE |
| | 2 | Cyperus | esculentus | CYPERACEAE |
| | 3 | Cyperus | filiculmis | CYPERACEAE |

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| | 3 | Cyperus | flavescens | CYPERACEAE |
| X | 10 | Cyperus | houghtonii | CYPERACEAE |
| | 5 | Cyperus | odoratus (incl. C. engelmanii and C. ferruginescens) | CYPERACEAE |
| | 9 | Cyperus | schweinitzii | CYPERACEAE |
| | 3 | Cyperus | squarrosus (C. inflexus) | CYPERACEAE |
| | 2 | Cyperus | strigosus | CYPERACEAE |
| | 6 | Cyperus | tenuifolius | CYPERACEAE |
| | 10 | Cypripedium | acaule | ORCHIDACEAE |
| E | 10 | Cypripedium | calceolus var. parviflorum | ORCHIDACEAE |
| | 8 | Cypripedium | calceolus var. pubescens | ORCHIDACEAE |
| E | 10 | Cypripedium | candidum | ORCHIDACEAE |
| T | 10 | Cypripedium | reginae | ORCHIDACEAE |
| | 7 | Cystopteris | bulbifera | ASPLENIACEAE |
| | 5 | Cystopteris | fragilis | ASPLENIACEAE |
| | 5 | Cystopteris | protrusa | ASPLENIACEAE |
| * | 0 | **Dactylis** | **glomerata** | POACEAE |
| * | 0 | **Dalea** | **purpurea** | FABACEAE |
| T | 10 | Dalibarda | repens | ROSACEAE |
| | 8 | Danthonia | compressa | POACEAE |
| | 3 | Danthonia | spicata | POACEAE |
| | 8 | Dasistoma | macrophylla | SCROPHULARIACEAE |
| * | 0 | **Datura** | **inoxia** | SOLANACEAE |
| * | 0 | **Datura** | **stramonium** | SOLANACEAE |
| * | 0 | **Daucus** | **carota** | APIACEAE |
| | 6 | Decodon | verticillatus | LYTHRACEAE |
| * | 0 | **Delphinium** | **ambiguum (Consolida a.)** | RANUNCULACEAE |
| | 8 | Delphinium | exaltatum | RANUNCULACEAE |
| | 4 | Delphinium | tricorne | RANUNCULACEAE |
| | 5 | Dennstaedtia | punctilobula | DENNSTAEDTIACEAE |
| | 10 | Deschampsia | cespitosa | POACEAE |
| T | 8 | Deschampsia | flexuosa | POACEAE |
| T | 7 | Descurainia | pinnata | BRASSICACEAE |
| * | 0 | **Descurainia** | **sophia** | BRASSICACEAE |
| | 9 | Desmanthus | illinoensis | MIMOSACEAE |

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| | 5 | Desmodium | canadense | FABACEAE |
| | 5 | Desmodium | canescens | FABACEAE |
| | 6 | Desmodium | ciliare (D. obtusum) | FABACEAE |
| | 4 | Desmodium | cuspidatum | FABACEAE |
| | 5 | Desmodium | glutinosum | FABACEAE |
| E | 10 | Desmodium | illinoense | FABACEAE |
| | 9 | Desmodium | laevigatum | FABACEAE |
| | 5 | Desmodium | nudiflorum | FABACEAE |
| | 4 | Desmodium | paniculatum | FABACEAE |
| | 6 | Desmodium | rotundifolium | FABACEAE |
| E | 8 | Desmodium | sessilifolium | FABACEAE |
| | 6 | Desmodium | viridiflorum | FABACEAE |
| * | 0 | **Dianthus** | **armeria** | CARYOPHYLLACEAE |
| * | 0 | **Dianthus** | **barbatus** | CARYOPHYLLACEAE |
| * | 0 | **Dianthus** | **deltoides** | CARYOPHYLLACEAE |
| | 8 | Diarrhena | americana | POACEAE |
| | 7 | Dicentra | canadensis | FUMARIACEAE |
| | 7 | Dicentra | cucullaria | FUMARIACEAE |
| | 6 | Diervilla | lonicera | CAPRIFOLIACEAE |
| * | 0 | **Digitalis** | **grandiflora** | SCROPHULARIACEAE |
| * | 0 | **Digitalis** | **lanata** | SCROPHULARIACEAE |
| * | 0 | **Digitaria** | **ischaemum** | POACEAE |
| * | 0 | **Digitaria** | **sanguinalis** | POACEAE |
| * | 0 | **Dioscorea** | **batatas** | DIOSCOREACEAE |
| | 4 | Dioscorea | villosa | DIOSCOREACEAE |
| | 3 | Diospyros | virginiana | EBENACEAE |
| * | 0 | **Diplotaxis** | **muralis** | BRASSICACEAE |
| * | 0 | **Diplotaxis** | **tenuifolia** | BRASSICACEAE |
| * | 0 | **Dipsacus** | **fullonum** | DIPSACACEAE |
| * | 0 | **Dipsacus** | **laciniatus** | DIPSACACEAE |
| * | 0 | **Dipsacus** | **sativus** | DIPSACACEAE |
| | 7 | Dirca | palustris | THYMELAEACEAE |
| | 8 | Disporum | lanuginosum | LILIACEAE |
| | 10 | Dodecatheon | meadia | PRIMULACEAE |

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| E | 7 | Draba | reptans | BRASSICACEAE |
| * | 0 | **Draba** | **verna (Erophila v.)** | BRASSICACEAE |
| * | 0 | **Dracocephalum** | **parviflorum** | LAMIACEAE |
| E | 10 | Drosera | intermedia | DROSERACEAE |
| | 7 | Drosera | rotundifolia | DROSERACEAE |
| | 5 | Dryopteris | carthusiana (D. spinulosa) | ASPLENIACEAE |
| T | 8 | Dryopteris | clintoniana | ASPLENIACEAE |
| | 8 | Dryopteris | cristata | ASPLENIACEAE |
| | 6 | Dryopteris | goldiana | ASPLENIACEAE |
| | 5 | Dryopteris | intermedia | ASPLENIACEAE |
| | 5 | Dryopteris | marginalis | ASPLENIACEAE |
| | 4 | Dryopteris | x boottii | ASPLENIACEAE |
| | 4 | Dryopteris | x neo-wherryi | ASPLENIACEAE |
| | 4 | Dryopteris | x triploidea | ASPLENIACEAE |
| * | 0 | **Duchesnea** | **indica** | ROSACEAE |
| | 6 | Dulichium | arundinaceum | CYPERACEAE |
| * | 0 | **Dyssodia** | **papposa** | ASTERACEAE |
| | 8 | Echinacea | purpurea | ASTERACEAE |
| * | 0 | **Echinochloa** | **crusgalli** | POACEAE |
| | 2 | Echinochloa | muricata | POACEAE |
| | 7 | Echinochloa | walteri | POACEAE |
| | 3 | Echinocystis | lobata | CUCURBITACEAE |
| * | 0 | **Echium** | **vulgare** | BORAGINACEAE |
| * | 0 | **Eclipta** | **prostrata (E. alba)** | ASTERACEAE |
| * | 0 | **Elaeagnus** | **angustifolia** | ELAEAGNACEAE |
| * | 0 | **Elaeagnus** | **umbellata** | ELAEAGNACEAE |
| | 3 | Eleocharis | acicularis | CYPERACEAE |
| E | 9 | Eleocharis | caribaea | CYPERACEAE |
| T | 9 | Eleocharis | compressa | CYPERACEAE |
| T | 8 | Eleocharis | flavescens var. olivacea (E. olivacea) | CYPERACEAE |
| | 8 | Eleocharis | intermedia | CYPERACEAE |
| | 2 | Eleocharis | ovata (E. obtusa) | CYPERACEAE |
| | 4 | Eleocharis | palustris (incl. E. erythropoda and E. smallii) | CYPERACEAE |
| T | 9 | Eleocharis | pauciflora | CYPERACEAE |

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| | 9 | Eleocharis | quadrangulata | CYPERACEAE |
| | 10 | Eleocharis | rostellata | CYPERACEAE |
| | 8 | Eleocharis | tenuis var. borealis (E.elliptica) | CYPERACEAE |
| * | 0 | **Eleusine** | **indica** | POACEAE |
| | 2 | Elodea | canadensis | HYDROCHARITACEAE |
| | 5 | Elodea | nuttallii | HYDROCHARITACEAE |
| | 3 | Elymus | canadensis | POACEAE |
| | 5 | Elymus | hystrix (Hystrix patula) | POACEAE |
| | 5 | Elymus | riparius | POACEAE |
| T | 8 | Elymus | trachycaulus (Agropyron t.) | POACEAE |
| | 4 | Elymus | villosus | POACEAE |
| | 3 | Elymus | virginicus | POACEAE |
| * | 0 | **Elytrigia** | **repens (Agropyron r.)** | POACEAE |
| * | 0 | **Elytrigia** | **smithii (Agropyron s.)** | POACEAE |
| | 8 | Epifagus | virginiana | OROBANCHACEAE |
| | 8 | Epigaea | repens | ERICACEAE |
| E | 8 | Epilobium | angustifolium | ONAGRACEAE |
| | 4 | Epilobium | ciliatum | ONAGRACEAE |
| | 2 | Epilobium | coloratum | ONAGRACEAE |
| * | 0 | **Epilobium** | **hirsutum** | ONAGRACEAE |
| | 7 | Epilobium | leptophyllum | ONAGRACEAE |
| * | 0 | **Epilobium** | **parviflorum** | ONAGRACEAE |
| T | 9 | Epilobium | strictum | ONAGRACEAE |
| * | 0 | **Epipactis** | **helleborine** | ORCHIDACEAE |
| | 0 | Equisetum | arvense | EQUISETACEAE |
| | 7 | Equisetum | fluviatile | EQUISETACEAE |
| | 2 | Equisetum | hyemale | EQUISETACEAE |
| | 8 | Equisetum | laevigatum | EQUISETACEAE |
| T | 7 | Equisetum | sylvaticum | EQUISETACEAE |
| T | 8 | Equisetum | variegatum | EQUISETACEAE |
| | 4 | Equisetum | x ferrissii | EQUISETACEAE |
| | 4 | Equisetum | x nelsonii | EQUISETACEAE |
| | 5 | Eragrostis | capillaris | POACEAE |
| * | 0 | **Eragrostis** | **cilianensis** | POACEAE |

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|---|---|---|---|---|
| * | 0 | **Eragrostis** | **curvula** | POACEAE |
| | 3 | Eragrostis | frankii | POACEAE |
| | 4 | Eragrostis | hypnoides | POACEAE |
| * | 0 | **Eragrostis** | **minor (E. poaeoides)** | POACEAE |
| | 2 | Eragrostis | pectinacea | POACEAE |
| * | 0 | **Eragrostis** | **pilosa** | POACEAE |
| | 2 | Eragrostis | spectabilis | POACEAE |
| | 3 | Erechtites | hieracifolia | ASTERACEAE |
| * | 0 | **Erica** | **tetralix** | ERICACEAE |
| | 6 | Erigenia | bulbosa | APIACEAE |
| | 1 | Erigeron | annuus | ASTERACEAE |
| | 2 | Erigeron | philadelphicus | ASTERACEAE |
| | 6 | Erigeron | pulchellus | ASTERACEAE |
| | 1 | Erigeron | strigosus | ASTERACEAE |
| E | 10 | Eriocaulon | aquaticum (E. septangulare) | ERIOCAULACEAE |
| | 10 | Eriophorum | virginicum | CYPERACEAE |
| | 10 | Eriophorum | viridicarinatum | CYPERACEAE |
| * | 0 | **Erodium** | **cicutarium** | GERANIACEAE |
| * | 0 | **Erucastrum** | **gallicum** | BRASSICACEAE |
| | 10 | Eryngium | yuccifolium | APIACEAE |
| * | 0 | **Erysimum** | **cheiranthoides** | BRASSICACEAE |
| * | 0 | **Erysimum** | **inconspicuum** | BRASSICACEAE |
| * | 0 | **Erysimum** | **repandum** | BRASSICACEAE |
| | 5 | Erythronium | albidum | LILIACEAE |
| | 5 | Erythronium | americanum | LILIACEAE |
| * | 0 | **Euonymus** | **alatus** | CELASTRACEAE |
| | 4 | Euonymus | atropurpureus | CELASTRACEAE |
| * | 0 | **Euonymus** | **europaeus** | CELASTRACEAE |
| * | 0 | **Euonymus** | **fortunei** | CELASTRACEAE |
| | 5 | Euonymus | obovatus | CELASTRACEAE |
| | 3 | Eupatorium | altissimum | ASTERACEAE |
| | 5 | Eupatorium | fistulosum | ASTERACEAE |
| | 6 | Eupatorium | maculatum | ASTERACEAE |
| | 3 | Eupatorium | perfoliatum | ASTERACEAE |

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| | 7 | Eupatorium | purpureum | ASTERACEAE |
| | 4 | Eupatorium | rugosum | ASTERACEAE |
| | 3 | Eupatorium | serotinum | ASTERACEAE |
| | 3 | Eupatorium | sessilifolium | ASTERACEAE |
| | 5 | Euphorbia | commutata | EUPHORBIACEAE |
| | 4 | Euphorbia | corollata | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **cyathophora** | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **cyparissias** | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **dentata** | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **esula** | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **falcata** | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **lathyris** | EUPHORBIACEAE |
| | 0 | Euphorbia | maculata | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **marginata** | EUPHORBIACEAE |
| | 0 | Euphorbia | nutans | EUPHORBIACEAE |
| | 6 | Euphorbia | obtusata | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **peplus** | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **platyphyllos** | EUPHORBIACEAE |
| | 10 | Euphorbia | polygonifolia | EUPHORBIACEAE |
| * | 0 | **Euphorbia** | **prostrata** | EUPHORBIACEAE |
| E | 8 | Euphorbia | serpens | EUPHORBIACEAE |
| | 1 | Euphorbia | vermiculata | EUPHORBIACEAE |
| | 2 | Euthamia | graminifolia | ASTERACEAE |
| T | 9 | Euthamia | remota (Solidago gymnospermoides) | ASTERACEAE |
| * | 0 | **Fagopyrum** | **esculentum** | POLYGONACEAE |
| | 6 | Fagus | grandifolia | FAGACEAE |
| * | 0 | **Festuca** | **elatior (F. arundinacea)** | POACEAE |
| * | 0 | **Festuca** | **ovina** | POACEAE |
| * | 0 | **Festuca** | **pratensis** | POACEAE |
| | 0 | Festuca | rubra | POACEAE |
| | 5 | Festuca | subverticillata (F. obtusa) | POACEAE |
| | 8 | Filipendula | rubra | ROSACEAE |
| * | 0 | **Filipendula** | **ulmaria** | ROSACEAE |
| | 4 | Fimbristylis | autumnalis | CYPERACEAE |

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| | 4 | Floerkea | proserpinacoides | LIMNANTHACEAE |
| * | 0 | **Foeniculum** | **vulgare** | APIACEAE |
| * | 0 | **Forsythia** | **x intermedia** | OLEACEAE |
| | 2 | Fragaria | virginiana | ROSACEAE |
| | 4 | Fragaria | vesca | ROSACEAE |
| | 8 | Frasera | caroliniensis (Swertia c.) | GENTIANACEAE |
| | 4 | Fraxinus | americana | OLEACEAE |
| | 7 | Fraxinus | nigra | OLEACEAE |
| | 6 | Fraxinus | pennsylvanica var. pennsylvanica | OLEACEAE |
| | 6 | Fraxinus | pennsylvanica var. subintegerrima | OLEACEAE |
| T | 8 | Fraxinus | profunda (F. tomentosa) | OLEACEAE |
| | 8 | Fraxinus | quadrangulata | OLEACEAE |
| * | 0 | **Froelichia** | **gracilis** | AMARANTHACEAE |
| * | 0 | **Fumaria** | **officinalis** | FUMARIACEAE |
| * | 0 | **Gaillardia** | **pulchella** | ASTERACEAE |
| * | 0 | **Galeopsis** | **tetrahit** | LAMIACEAE |
| * | 0 | **Galinsoga** | **parviflora** | ASTERACEAE |
| * | 0 | **Galinsoga** | **quadriradiata** | ASTERACEAE |
| | 2 | Galium | aparine | RUBIACEAE |
| | 3 | Galium | asprellum | RUBIACEAE |
| | 8 | Galium | boreale | RUBIACEAE |
| | 5 | Galium | circaezans | RUBIACEAE |
| | 4 | Galium | concinnum | RUBIACEAE |
| E | 10 | Galium | labradoricum | RUBIACEAE |
| | 6 | Galium | lanceolatum | RUBIACEAE |
| * | 0 | **Galium** | **mollugo** | RUBIACEAE |
| | 5 | Galium | obtusum | RUBIACEAE |
| * | 0 | **Galium** | **odoratum** | RUBIACEAE |
| E | 9 | Galium | palustre | RUBIACEAE |
| * | 0 | **Galium** | **pedemontanum** | RUBIACEAE |
| | 4 | Galium | pilosum | RUBIACEAE |
| | 6 | Galium | tinctorium | RUBIACEAE |
| | 7 | Galium | trifidum | RUBIACEAE |
| | 5 | Galium | triflorum | RUBIACEAE |

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| * | 0 | **Galium** | **verum** | RUBIACEAE |
| X | 10 | Gaultheria | hispidula | ERICACEAE |
| | 5 | Gaultheria | procumbens | ERICACEAE |
| | 2 | Gaura | biennis var. biennis | ONAGRACEAE |
| * | 0 | **Gaura** | **biennis var. pitcheri (G. longiflora)** | ONAGRACEAE |
| * | 0 | **Gaura** | **parviflora** | ONAGRACEAE |
| | 7 | Gaylussacia | baccata | ERICACEAE |
| | 6 | Gentiana | andrewsii | GENTIANACEAE |
| | 8 | Gentiana | clausa | GENTIANACEAE |
| E | 10 | Gentiana | flavida (G. alba) | GENTIANACEAE |
| E | 10 | Gentiana | puberulenta | GENTIANACEAE |
| E | 10 | Gentiana | saponaria | GENTIANACEAE |
| | 9 | Gentianella | quinquefolia (Gentiana q.) | GENTIANACEAE |
| | 8 | Gentianopsis | crinita (Gentiana c.) | GENTIANACEAE |
| | 8 | Gentianopsis | procera (Gentiana p.) | GENTIANACEAE |
| E | 9 | Geranium | bicknellii | GERANIACEAE |
| | 4 | Geranium | carolinianum | GERANIACEAE |
| * | 0 | **Geranium** | **dissectum** | GERANIACEAE |
| | 4 | Geranium | maculatum | GERANIACEAE |
| * | 0 | **Geranium** | **molle** | GERANIACEAE |
| * | 0 | **Geranium** | **pusillum** | GERANIACEAE |
| | 3 | Geranium | robertianum | GERANIACEAE |
| * | 0 | **Geranium** | **sanguineum** | GERANIACEAE |
| | 3 | Geum | aleppicum | ROSACEAE |
| | 2 | Geum | canadense | ROSACEAE |
| | 2 | Geum | laciniatum | ROSACEAE |
| | 9 | Geum | rivale | ROSACEAE |
| | 4 | Geum | vernum | ROSACEAE |
| | 4 | Geum | virginianum | ROSACEAE |
| * | 0 | **Gilia** | **rubra (Ipomopsis r.)** | POLEMONIACEAE |
| * | 0 | **Glechoma** | **hederacea (Glecoma h.)** | LAMIACEAE |
| | 1 | Gleditsia | triacanthos | CAESALPINIACEAE |
| E | 10 | Glyceria | acutiflora | POACEAE |
| X | 10 | Glyceria | borealis | POACEAE |

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| | 7 | Glyceria | canadensis | POACEAE |
| | 8 | Glyceria | grandis | POACEAE |
| | 7 | Glyceria | melicaria | POACEAE |
| | 5 | Glyceria | septentrionalis | POACEAE |
| | 2 | Glyceria | striata | POACEAE |
| * | 0 | **Glycine** | **max** | FABACEAE |
| X | 10 | Gnaphalium | macounii (G. viscosum) | ASTERACEAE |
| | 2 | Gnaphalium | obtusifolium | ASTERACEAE |
| | 3 | Gnaphalium | purpureum | ASTERACEAE |
| | 3 | Gnaphalium | uliginosum | ASTERACEAE |
| | 6 | Goodyera | pubescens | ORCHIDACEAE |
| X | 10 | Goodyera | tesselata | ORCHIDACEAE |
| | 4 | Gratiola | neglecta | SCROPHULARIACEAE |
| * | 0 | **Grindelia** | **squarrosa** | ASTERACEAE |
| T | 9 | Gymnocarpium | dryopteris | ASPLENIACEAE |
| ** | 0 | Gymnocladus | dioica | CAESALPINIACEAE |
| * | 0 | **Gypsophila** | **scorzonerifolia** | CARYOPHYLLACEAE |
| E | 10 | Habenaria | blephariglottis (Platanthera b.) | ORCHIDACEAE |
| T | 10 | Habenaria | ciliaris (Platanthera c.) | ORCHIDACEAE |
| | 8 | Habenaria | clavellata (Platanthera c.) | ORCHIDACEAE |
| | 6 | Habenaria | flava (Platanthera f.) | ORCHIDACEAE |
| | 10 | Habenaria | hookeri (Platanthera h.) | ORCHIDACEAE |
| | 10 | Habenaria | hyperborea (Platanthera h.) | ORCHIDACEAE |
| | 6 | Habenaria | lacera (Platanthera l.) | ORCHIDACEAE |
| | 10 | Habenaria | leucophaea (Platanthera l.) | ORCHIDACEAE |
| | 7 | Habenaria | orbiculata (Platanthera o.) | ORCHIDACEAE |
| | 7 | Habenaria | peramoena (Platanthera p.) | ORCHIDACEAE |
| X | 10 | Habenaria | psycodes var. grandiflora (Platanthera p.) | ORCHIDACEAE |
| | 9 | Habenaria | psycodes var. psycodes (Platanthera p.) | ORCHIDACEAE |
| E | 10 | Habenaria | viridis (Coeloglossum v.) | ORCHIDACEAE |
| | 2 | Hackelia | virginiana | BORAGINACEAE |
| | 5 | Hamamelis | virginiana | HAMAMELIDACEAE |
| T | 8 | Hedeoma | hispidum | LAMIACEAE |
| | 2 | Hedeoma | pulegioides | LAMIACEAE |

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| | 4 | Hedyotis | caerulea (Houstonia c.) | RUBIACEAE |
| | 6 | Hedyotis | canadensis (Houstonia c.) | RUBIACEAE |
| | 7 | Hedyotis | longifolia (Houstonia l.) | RUBIACEAE |
| | 8 | Hedyotis | nigricans (Houstonia n.) | RUBIACEAE |
| | 7 | Hedyotis | purpurea (Houstonia p.) | RUBIACEAE |
| | 4 | Helenium | autumnale | ASTERACEAE |
| * | 0 | **Helenium** | **flexuosum** | ASTERACEAE |
| T | 9 | Helianthemum | bicknellii | CISTACEAE |
| T | 9 | Helianthemum | canadense | CISTACEAE |
| * | 0 | **Helianthus** | **annuus** | ASTERACEAE |
| | 4 | Helianthus | decapetalus | ASTERACEAE |
| | 5 | Helianthus | divaricatus | ASTERACEAE |
| | 6 | Helianthus | giganteus | ASTERACEAE |
| | 4 | Helianthus | grosseserratus | ASTERACEAE |
| | 5 | Helianthus | hirsutus | ASTERACEAE |
| * | 0 | **Helianthus** | **maximilianii** | ASTERACEAE |
| | 4 | Helianthus | microcephalus | ASTERACEAE |
| T | 8 | Helianthus | mollis | ASTERACEAE |
| | 7 | Helianthus | occidentalis | ASTERACEAE |
| * | 0 | **Helianthus** | **petiolaris** | ASTERACEAE |
| | 5 | Helianthus | strumosus | ASTERACEAE |
| | 3 | Helianthus | tuberosus | ASTERACEAE |
| | 4 | Helianthus | x laetiflorus | ASTERACEAE |
| | 5 | Heliopsis | helianthoides | ASTERACEAE |
| * | 0 | **Heliotropium** | **europaeum** | BORAGINACEAE |
| * | 0 | **Hemerocallis** | **fulva** | LILIACEAE |
| * | 0 | **Hemerocallis** | **lilio-asphodelus** | LILIACEAE |
| T | 8 | Hemicarpha | micrantha | CYPERACEAE |
| | 5 | Hepatica | acutiloba | RANUNCULACEAE |
| | 5 | Hepatica | americana | RANUNCULACEAE |
| | 4 | Heracleum | lanatum | APIACEAE |
| * | 0 | **Hesperis** | **matronalis** | BRASSICACEAE |
| | 6 | Heteranthera | dubia | PONTEDERIACEAE |
| | 6 | Heuchera | americana | SAXIFRAGACEAE |

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| | 9 | Hibiscus | laevis | MALVACEAE |
| | 8 | Hibiscus | moscheutos | MALVACEAE |
| * | 0 | **Hibiscus** | **trionum** | MALVACEAE |
| * | 0 | **Hieracium** | **aurantiacum** | ASTERACEAE |
| * | 0 | **Hieracium** | **caespitosum** | ASTERACEAE |
| * | 0 | **Hieracium** | **floribundum** | ASTERACEAE |
| | 6 | Hieracium | gronovii | ASTERACEAE |
| | 10 | Hieracium | kalmii (H. canadense) | ASTERACEAE |
| E | 7 | Hieracium | longipilum | ASTERACEAE |
| | 6 | Hieracium | paniculatum | ASTERACEAE |
| * | 0 | **Hieracium** | **pilosella** | ASTERACEAE |
| * | 0 | **Hieracium** | **piloselloides (H. florentinum)** | ASTERACEAE |
| | 5 | Hieracium | scabrum | ASTERACEAE |
| | 8 | Hieracium | trailii | ASTERACEAE |
| | 7 | Hieracium | venosum | ASTERACEAE |
| | 8 | Hierochloe | odorata | POACEAE |
| * | 0 | **Holcus** | **lanatus** | POACEAE |
| * | 0 | **Holosteum** | **umbellatum** | CARYOPHYLLACEAE |
| * | 0 | **Hordeum** | **jubatum** | POACEAE |
| * | 0 | **Hordeum** | **pusillum** | POACEAE |
| * | 0 | **Hordeum** | **vulgare** | POACEAE |
| * | 0 | **Hosta** | **lancifolia** | LILIACEAE |
| E | 10 | Hudsonia | tomentosa | CISTACEAE |
| * | 0 | **Humulus** | **japonicus** | CANNABACEAE |
| | 2 | Humulus | lupulus | CANNABACEAE |
| | 7 | Hybanthus | concolor | VIOLACEAE |
| ** | 10 | Hydrangea | arborescens | HYDRANGEACEAE |
| | 7 | Hydrastis | canadensis | RANUNCULACEAE |
| | 8 | Hydrocotyle | americana | APIACEAE |
| * | 0 | **Hydrocotyle** | **ranunculoides** | APIACEAE |
| E | 10 | Hydrocotyle | umbellata | APIACEAE |
| | 6 | Hydrophyllum | appendiculatum | HYDROPHYLLACEAE |
| | 6 | Hydrophyllum | canadense | HYDROPHYLLACEAE |
| | 7 | Hydrophyllum | macrophyllum | HYDROPHYLLACEAE |

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|---|---|---|---|---|
| | 5 | Hydrophyllum | virginianum | HYDROPHYLLACEAE |
| E | 10 | Hymenoxys | herbacea | ASTERACEAE |
| E | 10 | Hypericum | boreale | CLUSIACEAE |
| T | 8 | Hypericum | canadense | CLUSIACEAE |
| | 6 | Hypericum | drummondii | CLUSIACEAE |
| T | 8 | Hypericum | ellipticum | CLUSIACEAE |
| | 4 | Hypericum | gentianoides | CLUSIACEAE |
| E | 10 | Hypericum | gymnanthum | CLUSIACEAE |
| T | 10 | Hypericum | kalmianum | CLUSIACEAE |
| | 7 | Hypericum | majus | CLUSIACEAE |
| | 5 | Hypericum | mutilum | CLUSIACEAE |
| * | 0 | **Hypericum** | **perforatum** | CLUSIACEAE |
| | 4 | Hypericum | prolificum | CLUSIACEAE |
| | 3 | Hypericum | punctatum | CLUSIACEAE |
| | 7 | Hypericum | pyramidatum | CLUSIACEAE |
| | 7 | Hypericum | sphaerocarpum | CLUSIACEAE |
| * | 0 | **Hypochoeris** | **radicata** | ASTERACEAE |
| | 7 | Hypoxis | hirsuta | LILIACEAE |
| * | 0 | **Iberis** | **umbellata** | BRASSICACEAE |
| ** | 0 | Ilex | opaca | AQUIFOLIACEAE |
| | 7 | Ilex | verticillata | AQUIFOLIACEAE |
| * | 0 | **Impatiens** | **balsamina** | BALSAMINACEAE |
| | 2 | Impatiens | capensis | BALSAMINACEAE |
| | 3 | Impatiens | pallida | BALSAMINACEAE |
| * | 0 | **Inula** | **helenium** | ASTERACEAE |
| | 6 | Iodanthus | pinnatifidus | BRASSICACEAE |
| * | 0 | **Ipomoea** | **coccinea** | CONVOLVULACEAE |
| * | 0 | **Ipomoea** | **hederacea** | CONVOLVULACEAE |
| | 3 | Ipomoea | pandurata | CONVOLVULACEAE |
| * | 0 | **Ipomoea** | **purpurea** | CONVOLVULACEAE |
| E | 10 | Iris | brevicaulis | IRIDACEAE |
| | 8 | Iris | cristata | IRIDACEAE |
| * | 0 | **Iris** | **germanica** | IRIDACEAE |
| * | 0 | **Iris** | **pseudacorus** | IRIDACEAE |

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|---|---|---|---|---|
| | 6 | Iris | versicolor | IRIDACEAE |
| | 6 | Iris | virginica var. shrevei | IRIDACEAE |
| | 4 | Isanthus | brachiatus | LAMIACEAE |
| X | 10 | Isoetes | echinospora | ISOETACEAE |
| E | 10 | Isoetes | engelmannii | ISOETACEAE |
| | 7 | Isopyrum | biternatum | RANUNCULACEAE |
| | 9 | Isotria | verticillata | ORCHIDACEAE |
| * | 0 | **Iva** | **xanthifolia** | ASTERACEAE |
| | 7 | Jeffersonia | diphylla | BERBERIDACEAE |
| | 10 | Juglans | cinerea | JUGLANDACEAE |
| | 5 | Juglans | nigra | JUGLANDACEAE |
| | 3 | Juncus | acuminatus | JUNCACEAE |
| T | 10 | Juncus | alpinoarticulatus (J. alpinus) | JUNCACEAE |
| | 9 | Juncus | arcticus (J. balticus) | JUNCACEAE |
| | 4 | Juncus | articulatus | JUNCACEAE |
| | 4 | Juncus | biflorus | JUNCACEAE |
| | 5 | Juncus | brachycarpus | JUNCACEAE |
| | 6 | Juncus | brachycephalus | JUNCACEAE |
| | 3 | Juncus | bufonius | JUNCACEAE |
| | 4 | Juncus | canadensis | JUNCACEAE |
| | 1 | Juncus | effusus | JUNCACEAE |
| * | 0 | **Juncus** | **gerardii** | JUNCACEAE |
| E | 7 | Juncus | greenei | JUNCACEAE |
| | 6 | Juncus | marginatus | JUNCACEAE |
| | 4 | Juncus | nodosus | JUNCACEAE |
| T | 7 | Juncus | secundus | JUNCACEAE |
| T | 7 | Juncus | tenuis var. dichotomus (J. platyphyllus) | JUNCACEAE |
| | 4 | Juncus | tenuis var. dudleyi | JUNCACEAE |
| | 1 | Juncus | tenuis var. tenuis (incl. J. interior) | JUNCACEAE |
| | 3 | Juncus | torreyi | JUNCACEAE |
| T | 8 | Juniperus | communis | CUPRESSACEAE |
| | 3 | Juniperus | virginiana | CUPRESSACEAE |
| | 8 | Justicia | americana | ACANTHACEAE |
| * | 0 | **Kerria** | **japonica** | ROSACEAE |

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|---|---|---|---|---|
| * | 0 | **Kickxia** | **elatine** | SCROPHULARIACEAE |
| * | 0 | **Kickxia** | **spuria** | SCROPHULARIACEAE |
| * | 0 | **Kochia** | **scoparia** | CHENOPODIACEAE |
| E | 10 | Koeleria | pyramidata (K. cristata) | POACEAE |
| | 7 | Krigia | biflora | ASTERACEAE |
| T | 9 | Krigia | virginica | ASTERACEAE |
| | 8 | Kuhnia | eupatorioides | ASTERACEAE |
| | 1 | Lactuca | biennis | ASTERACEAE |
| | 2 | Lactuca | canadensis | ASTERACEAE |
| | 4 | Lactuca | floridana | ASTERACEAE |
| * | 0 | **Lactuca** | **pulchella** | ASTERACEAE |
| * | 0 | **Lactuca** | **saligna** | ASTERACEAE |
| * | 0 | **Lactuca** | **serriola** | ASTERACEAE |
| * | 0 | **Lamium** | **amplexicaule** | LAMIACEAE |
| * | 0 | **Lamium** | **maculatum** | LAMIACEAE |
| * | 0 | **Lamium** | **purpureum** | LAMIACEAE |
| | 5 | Laportea | canadensis | URTICACEAE |
| * | 0 | **Lappula** | **squarrosa** | BORAGINACEAE |
| * | 0 | **Lapsana** | **communis** | ASTERACEAE |
| | 10 | Larix | laricina | PINACEAE |
| * | 0 | **Lathyrus** | **latifolius** | FABACEAE |
| T | 10 | Lathyrus | maritimus (L. japonicus) | FABACEAE |
| T | 9 | Lathyrus | ochroleucus | FABACEAE |
| * | 0 | **Lathyrus** | **odoratus** | FABACEAE |
| | 7 | Lathyrus | palustris | FABACEAE |
| * | 0 | **Lathyrus** | **pratensis** | FABACEAE |
| * | 0 | **Lathyrus** | **tuberosus** | FABACEAE |
| E | 8 | Lathyrus | venosus | FABACEAE |
| T | 7 | Lechea | intermedia | CISTACEAE |
| E | 7 | Lechea | minor | CISTACEAE |
| T | 7 | Lechea | mucronata (L. villosa) | CISTACEAE |
| | 7 | Lechea | pulchella (L. leggettii) | CISTACEAE |
| | 5 | Lechea | racemulosa | CISTACEAE |
| E | 8 | Lechea | tenuifolia | CISTACEAE |

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|---|---|---|---|---|
| E | 10 | Ledum | groenlandicum | ERICACEAE |
| | 1 | Leersia | oryzoides | POACEAE |
| | 3 | Leersia | virginica | POACEAE |
| | 4 | Lemna | minor | LEMNACEAE |
| | 6 | Lemna | trisulca | LEMNACEAE |
| X | 10 | Lemna | valdiviana | LEMNACEAE |
| * | 0 | **Leontodon** | **hispidus (L. hastilis)** | ASTERACEAE |
| * | 0 | **Leontodon** | **taraxacoides** | ASTERACEAE |
| * | 0 | **Leonurus** | **cardiaca** | LAMIACEAE |
| * | 0 | **Leonurus** | **marrubiastrum** | LAMIACEAE |
| * | 0 | **Lepidium** | **campestre** | BRASSICACEAE |
| * | 0 | **Lepidium** | **densiflorum** | BRASSICACEAE |
| * | 0 | **Lepidium** | **perfoliatum** | BRASSICACEAE |
| * | 0 | **Lepidium** | **ruderale** | BRASSICACEAE |
| * | 0 | **Lepidium** | **sativum** | BRASSICACEAE |
| | 1 | Lepidium | virginicum | BRASSICACEAE |
| * | 0 | **Leptochloa** | **fascicularis** | POACEAE |
| | 4 | Leptoloma | cognatum | POACEAE |
| | 6 | Lespedeza | capitata | FABACEAE |
| * | 0 | **Lespedeza** | **cuneata** | FABACEAE |
| | 5 | Lespedeza | hirta | FABACEAE |
| | 4 | Lespedeza | intermedia | FABACEAE |
| | 6 | Lespedeza | procumbens | FABACEAE |
| | 7 | Lespedeza | repens | FABACEAE |
| * | 0 | **Lespedeza** | **stipulacea** | FABACEAE |
| * | 0 | **Lespedeza** | **striata** | FABACEAE |
| | 4 | Lespedeza | violacea | FABACEAE |
| | 2 | Lespedeza | virginica | FABACEAE |
| | 5 | Lespedeza | x nuttallii | FABACEAE |
| * | 0 | **Leucojum** | **aestivum** | LILIACEAE |
| | 8 | Leucospora | multifida | SCROPHULARIACEAE |
| | 6 | Liatris | aspera | ASTERACEAE |
| T | 8 | Liatris | cylindracea | ASTERACEAE |
| * | 0 | **Liatris** | **pycnostachya** | ASTERACEAE |

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|---|---|---|---|---|
| * | 0 | **Liatris** | **scariosa** | ASTERACEAE |
| | 8 | Liatris | spicata | ASTERACEAE |
| | 8 | Liatris | squarrosa | ASTERACEAE |
| * | 0 | **Ligustrum** | **obtusifolium** | OLEACEAE |
| * | 0 | **Ligustrum** | **ovalifolium** | OLEACEAE |
| * | 0 | **Ligustrum** | **vulgare** | OLEACEAE |
| | 5 | Lilium | canadense | LILIACEAE |
| | 7 | Lilium | michiganense | LILIACEAE |
| T | 8 | Lilium | philadelphicum | LILIACEAE |
| | 7 | Lilium | superbum | LILIACEAE |
| E | 8 | Linaria | canadensis | SCROPHULARIACEAE |
| * | 0 | **Linaria** | **dalmatica** | SCROPHULARIACEAE |
| * | 0 | **Linaria** | **vulgaris** | SCROPHULARIACEAE |
| | 6 | Lindera | benzoin | LAURACEAE |
| | 4 | Lindernia | dubia | SCROPHULARIACEAE |
| X | 10 | Linnaea | borealis | CAPRIFOLIACEAE |
| | 6 | Linum | medium var. texanum | LINACEAE |
| * | 0 | **Linum** | **perenne** | LINACEAE |
| | 8 | Linum | striatum | LINACEAE |
| | 8 | Linum | sulcatum | LINACEAE |
| * | 0 | **Linum** | **usitatissimum** | LINACEAE |
| | 5 | Linum | virginianum | LINACEAE |
| | 5 | Liparis | lilifolia | ORCHIDACEAE |
| | 9 | Liparis | loeselii | ORCHIDACEAE |
| | 6 | Liriodendron | tulipifera | MAGNOLIACEAE |
| X | 10 | Listera | cordata | ORCHIDACEAE |
| * | 0 | **Lithospermum** | **arvense** | BORAGINACEAE |
| | 7 | Lithospermum | canescens | BORAGINACEAE |
| T | 9 | Lithospermum | caroliniense | BORAGINACEAE |
| | 7 | Lithospermum | latifolium | BORAGINACEAE |
| * | 0 | **Lithospermum** | **officinale** | BORAGINACEAE |
| | 7 | Lobelia | cardinalis | CAMPANULACEAE |
| | 1 | Lobelia | inflata | CAMPANULACEAE |
| | 9 | Lobelia | kalmii | CAMPANULACEAE |

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| | 6 | Lobelia | spicata | CAMPANULACEAE |
| | 4 | Lobelia | siphilitica | CAMPANULACEAE |
| * | 0 | **Lobularia** | **maritima** | BRASSICACEAE |
| * | 0 | **Lolium** | **perenne var. aristatum** | POACEAE |
| * | 0 | **Lolium** | **perenne var. perenne** | POACEAE |
| X | 10 | Lonicera | caerulea var. villosa | CAPRIFOLIACEAE |
| | 8 | Lonicera | canadensis | CAPRIFOLIACEAE |
| | 5 | Lonicera | dioica | CAPRIFOLIACEAE |
| * | 0 | **Lonicera** | **japonica** | CAPRIFOLIACEAE |
| * | 0 | **Lonicera** | **maackii** | CAPRIFOLIACEAE |
| * | 0 | **Lonicera** | **morrowii** | CAPRIFOLIACEAE |
| X | 10 | Lonicera | oblongifolia | CAPRIFOLIACEAE |
| | 7 | Lonicera | prolifera | CAPRIFOLIACEAE |
| | 6 | Lonicera | sempervirens | CAPRIFOLIACEAE |
| * | 0 | **Lonicera** | **tatarica** | CAPRIFOLIACEAE |
| * | 0 | **Lonicera** | **xylosteum** | CAPRIFOLIACEAE |
| * | 0 | **Lonicera** | **x bella** | CAPRIFOLIACEAE |
| * | 0 | **Lotus** | **corniculatus** | FABACEAE |
| | 5 | Ludwigia | alternifolia | ONAGRACEAE |
| | 4 | Ludwigia | palustris | ONAGRACEAE |
| | 7 | Ludwigia | polycarpa | ONAGRACEAE |
| * | 0 | **Lunaria** | **annua** | BRASSICACEAE |
| * | 0 | **Lunaria** | **rediviva** | BRASSICACEAE |
| | 10 | Lupinus | perennis | FABACEAE |
| T | 8 | Luzula | bulbosa | JUNCACEAE |
| | 7 | Luzula | carolinae | JUNCACEAE |
| | 4 | Luzula | echinata | JUNCACEAE |
| | 5 | Luzula | multiflora | JUNCACEAE |
| * | 0 | **Lychnis** | **coronaria** | CARYOPHYLLACEAE |
| * | 0 | **Lychnis** | **flos-cuculi** | CARYOPHYLLACEAE |
| * | 0 | **Lychnis** | **viscaria** | CARYOPHYLLACEAE |
| * | 0 | **Lycium** | **barbarum (L. halimifolium)** | SOLANACEAE |
| * | 0 | **Lycopersicon** | **esculentum** | SOLANACEAE |
| | 3 | Lycopodium | clavatum | LYCOPODIACEAE |

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| | 5 | Lycopodium | dendroideum | LYCOPODIACEAE |
| | 3 | Lycopodium | digitatum (L. flabelliforme) | LYCOPODIACEAE |
| | 9 | Lycopodium | inundatum | LYCOPODIACEAE |
| | 8 | Lycopodium | lucidulum | LYCOPODIACEAE |
| | 5 | Lycopodium | obscurum | LYCOPODIACEAE |
| | 9 | Lycopodium | porophilum | LYCOPODIACEAE |
| | 6 | Lycopodium | tristachyum | LYCOPODIACEAE |
| | 3 | Lycopodium | x habereri | LYCOPODIACEAE |
| | 3 | Lycopus | americanus | LAMIACEAE |
| * | 0 | **Lycopus** | **asper** | LAMIACEAE |
| * | 0 | **Lycopus** | **europaeus** | LAMIACEAE |
| | 6 | Lycopus | rubellus | LAMIACEAE |
| | 3 | Lycopus | uniflorus | LAMIACEAE |
| | 4 | Lycopus | virginicus | LAMIACEAE |
| * | 0 | **Lycoris** | **squamigera** | LILIACEAE |
| | 4 | Lysimachia | ciliata | PRIMULACEAE |
| | 8 | Lysimachia | lanceolata | PRIMULACEAE |
| * | 0 | **Lysimachia** | **nummularia** | PRIMULACEAE |
| * | 0 | **Lysimachia** | **punctata** | PRIMULACEAE |
| | 8 | Lysimachia | quadriflora | PRIMULACEAE |
| | 5 | Lysimachia | quadrifolia | PRIMULACEAE |
| | 6 | Lysimachia | terrestris | PRIMULACEAE |
| | 6 | Lysimachia | thyrsiflora | PRIMULACEAE |
| * | 0 | **Lysimachia** | **vulgaris** | PRIMULACEAE |
| | 3 | Lysimachia | x producta | PRIMULACEAE |
| | 7 | Lythrum | alatum | LYTHRACEAE |
| * | 0 | **Lythrum** | **hyssopifolia** | LYTHRACEAE |
| * | 0 | **Lythrum** | **salicaria** | LYTHRACEAE |
| * | 0 | **Maclura** | **pomifera** | MORACEAE |
| | 7 | Magnolia | acuminata | MAGNOLIACEAE |
| | 7 | Maianthemum | canadense | LILIACEAE |
| | 8 | Malaxis | unifolia | ORCHIDACEAE |
| * | 0 | **Malva** | **moschata** | MALVACEAE |
| * | 0 | **Malva** | **neglecta** | MALVACEAE |

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| * | 0 | **Malva** | **rotundifolia** | MALVACEAE |
| * | 0 | **Malva** | **sylvestris** | MALVACEAE |
| * | 0 | **Marrubium** | **vulgare** | LAMIACEAE |
| * | 0 | **Matricaria** | **maritima** | ASTERACEAE |
| * | 0 | **Matricaria** | **matricarioides** | ASTERACEAE |
| * | 0 | **Matricaria** | **recutita** | ASTERACEAE |
| | 5 | Matteuccia | struthiopteris | ONOCLEACEAE |
| | 7 | Medeola | virginiana | LILIACEAE |
| * | 0 | **Medicago** | **lupulina** | FABACEAE |
| * | 0 | **Medicago** | **sativa** | FABACEAE |
| | 9 | Melampyrum | lineare | SCROPHULARIACEAE |
| T | 10 | Melanthium | virginicum | LILIACEAE |
| * | 0 | **Melilotus** | **alba** | FABACEAE |
| * | 0 | **Melilotus** | **altissima** | FABACEAE |
| * | 0 | **Melilotus** | **officinalis** | FABACEAE |
| * | 0 | **Melissa** | **officinalis** | LAMIACEAE |
| | 5 | Menispermum | canadense | MENISPERMACEAE |
| | 2 | Mentha | arvensis | LAMIACEAE |
| * | 0 | **Mentha** | **longifolia** | LAMIACEAE |
| * | 0 | **Mentha** | **spicata** | LAMIACEAE |
| * | 0 | **Mentha** | **x citrata** | LAMIACEAE |
| * | 0 | **Mentha** | **x gentilis** | LAMIACEAE |
| * | 0 | **Mentha** | **x piperita** | LAMIACEAE |
| * | 0 | **Mentha** | **x rotundifolia** | LAMIACEAE |
| * | 0 | **Mentha** | **x villosa** | LAMIACEAE |
| T | 9 | Menyanthes | trifoliata | MENYANTHACEAE |
| | 8 | Mertensia | virginica | BORAGINACEAE |
| | 8 | Milium | effusum | POACEAE |
| | 6 | Mimulus | alatus | SCROPHULARIACEAE |
| | 5 | Mimulus | ringens | SCROPHULARIACEAE |
| * | 0 | **Mirabilis** | **jalapa** | NYCTAGINACEAE |
| * | 0 | **Mirabilis** | **nyctaginea** | NYCTAGINACEAE |
| * | 0 | **Miscanthus** | **sinensis** | POACEAE |
| | 5 | Mitchella | repens | RUBIACEAE |

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| | 7 | Mitella | diphylla | SAXIFRAGACEAE |
| * | 0 | **Mollugo** | **verticillata** | AIZOACEAE |
| | 5 | Monarda | clinopodia | LAMIACEAE |
| | 7 | Monarda | didyma | LAMIACEAE |
| | 5 | Monarda | fistulosa | LAMIACEAE |
| E | 7 | Monarda | punctata | LAMIACEAE |
| | 5 | Monarda | x media | LAMIACEAE |
| E | 8 | Moneses | uniflora | PYROLACEAE |
| | 7 | Monotropa | hypopithys | MONOTROPACEAE |
| | 5 | Monotropa | uniflora | MONOTROPACEAE |
| * | 0 | **Morus** | **alba** | MORACEAE |
| * | 0 | **Morus** | **nigra** | MORACEAE |
| | 6 | Morus | rubra | MORACEAE |
| * | 0 | **Muhlenbergia** | **asperifolia** | POACEAE |
| | 3 | Muhlenbergii | frondosa | POACEAE |
| | 9 | Muhlenbergia | glomerata | POACEAE |
| | 5 | Muhlenbergia | mexicana | POACEAE |
| | 1 | Muhlenbergia | schreberi | POACEAE |
| | 8 | Muhlenbergia | sobolifera | POACEAE |
| | 6 | Muhlenbergia | sylvatica | POACEAE |
| | 8 | Muhlenbergia | tenuiflora | POACEAE |
| * | 0 | **Muscari** | **botryoides** | LILIACEAE |
| * | 0 | **Myosotis** | **arvensis** | BORAGINACEAE |
| * | 0 | **Myosotis** | **discolor** | BORAGINACEAE |
| | 7 | Myosotis | laxa | BORAGINACEAE |
| * | 0 | **Myosotis** | **micrantha (M. stricta)** | BORAGINACEAE |
| * | 0 | **Myosotis** | **scorpioides** | BORAGINACEAE |
| * | 0 | **Myosotis** | **sylvatica** | BORAGINACEAE |
| | 7 | Myosotis | verna | BORAGINACEAE |
| E | 10 | Myrica | pensylvanica | MYRICACEAE |
| E | 10 | Myriophyllum | heterophyllum | HALORAGACEAE |
| | 8 | Myriophyllum | sibiricum (M. exalbescens) | HALORAGACEAE |
| * | 0 | **Myriophyllum** | **spicatum** | HALORAGACEAE |
| E | 10 | Myriophyllum | verticillatum | HALORAGACEAE |

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| | 8 | Najas | flexilis | NAJADACEAE |
| E | 10 | Najas | gracillima | NAJADACEAE |
| | 7 | Najas | guadalupensis | NAJADACEAE |
| * | 0 | **Najas** | **minor** | NAJADACEAE |
| ** | 0 | Napaea | dioica | MALVACEAE |
| * | 0 | **Narcissus** | **pseudonarcissus** | LILIACEAE |
| | 9 | Nelumbo | lutea | NELUMBONACEAE |
| | 10 | Nemopanthus | mucronatus | AQUIFOLIACEAE |
| * | 0 | **Nepeta** | **cataria** | LAMIACEAE |
| * | 0 | **Nicandra** | **physalodes** | SOLANACEAE |
| * | 0 | **Nicotiana** | **tabacum** | SOLANACEAE |
| | 5 | Nuphar | advena | NYMPHAEACEAE |
| E | 10 | Nuphar | variegata | NYMPHAEACEAE |
| | 7 | Nymphaea | odorata | NYMPHAEACEAE |
| * | 0 | **Nymphoides** | **peltata** | MENYANTHACEAE |
| | 7 | Nyssa | sylvatica | CORNACEAE |
| | 8 | Obolaria | virginica | GENTIANACEAE |
| | 2 | Oenothera | biennis | ONAGRACEAE |
| | 5 | Oenothera | fruticosa var. ambigua | ONAGRACEAE |
| | 3 | Oenothera | laciniata | ONAGRACEAE |
| | 4 | Oenothera | perennis | ONAGRACEAE |
| | 4 | Oenothera | pilosella | ONAGRACEAE |
| * | 0 | **Oenothera** | **speciosa** | ONAGRACEAE |
| | 3 | Onoclea | sensibilis | ASPLENIACEAE |
| | 8 | Onosmodium | molle var. hispidissimum | BORAGINACEAE |
| | 6 | Ophioglossum | vulgatum | OPHIOGLOSSACEAE |
| | 9 | Opuntia | humifusa | CACTACEAE |
| | 9 | Orbexilum | pedunculatum (Psoralea onobrychis) | FABACEAE |
| | 7 | Orchis | spectabilis | ORCHIDACEAE |
| * | 0 | **Origanum** | **vulgare** | LAMIACEAE |
| * | 0 | **Ornithogalum** | **umbellatum** | LILIACEAE |
| | 7 | Orobanche | uniflora | OROBANCHACEAE |
| E | 10 | Oryzopsis | asperifolia | POACEAE |
| E | 10 | Oryzopsis | racemosa | POACEAE |

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|---|---|---|---|---|
| | 5 | Osmorhiza | claytonii | APIACEAE |
| | 5 | Osmorhiza | longistylis | APIACEAE |
| | 6 | Osmunda | cinnamomea | OSMUNDACEAE |
| | 6 | Osmunda | claytoniana | OSMUNDACEAE |
| | 8 | Osmunda | regalis | OSMUNDACEAE |
| | 5 | Ostrya | virginiana | BETULACEAE |
| E | 10 | Oxalis | acetosella (O. montana) | OXALIDACEAE |
| * | 0 | **Oxalis** | **corniculata** | OXALIDACEAE |
| | 0 | Oxalis | dillenii | OXALIDACEAE |
| | 7 | Oxalis | grandis | OXALIDACEAE |
| | 0 | Oxalis | stricta | OXALIDACEAE |
| | 6 | Oxalis | violacea | OXALIDACEAE |
| | 8 | Oxypolis | rigidior | APIACEAE |
| | 8 | Panax | quinquefolium | ARALIACEAE |
| | 7 | Panax | trifolium | ARALIACEAE |
| T | 8 | Panicum | boreale (incl. P. bicknellii) | POACEAE |
| | 5 | Panicum | boscii | POACEAE |
| X | 10 | Panicum | calliphyllum | POACEAE |
| | 1 | Panicum | capillare (incl. P. gattingeri) | POACEAE |
| | 3 | Panicum | clandestinum | POACEAE |
| | 9 | Panicum | columbianum | POACEAE |
| | 5 | Panicum | commutatum | POACEAE |
| | 9 | Panicum | depauperatum | POACEAE |
| | 1 | Panicum | dichotomiflorum | POACEAE |
| | 3 | Panicum | dichotomum | POACEAE |
| | 2 | Panicum | lanuginosum | POACEAE |
| | 3 | Panicum | latifolium | POACEAE |
| | 4 | Panicum | linearifolium | POACEAE |
| | 5 | Panicum | microcarpon | POACEAE |
| * | 0 | **Panicum** | **miliaceum** | POACEAE |
| | 7 | Panicum | oligosanthes | POACEAE |
| T | 8 | Panicum | philadelphicum | POACEAE |
| | 4 | Panicum | rigidulum (incl. P. agrostoides and P. stipitatum) | POACEAE |
| | 4 | Panicum | sphaerocarpon | POACEAE |

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| E | 10 | Panicum | spretum | POACEAE |
| T | 9 | Panicum | villosissimum | POACEAE |
| | 4 | Panicum | virgatum | POACEAE |
| * | 0 | **Papaver** | **argemone** | PAPAVERACEAE |
| * | 0 | **Papaver** | **dubium** | PAPAVERACEAE |
| * | 0 | **Papaver** | **rhoeas** | PAPAVERACEAE |
| * | 0 | **Papaver** | **somniferum** | PAPAVERACEAE |
| | 6 | Parietaria | pensylvanica | URTICACEAE |
| | 10 | Parnassia | glauca | SAXIFRAGACEAE |
| | 4 | Paronychia | canadensis | CARYOPHYLLACEAE |
| | 7 | Paronychia | fastigiata | CARYOPHYLLACEAE |
| | 3 | Parthenocissus | quinquefolia | VITACEAE |
| | 1 | Parthenocissus | vitacea (P. inserta) | VITACEAE |
| | 3 | Paspalum | setaceum var. ciliatifolium | POACEAE |
| * | 0 | **Pastinaca** | **sativa** | APIACEAE |
| | 6 | Pedicularis | canadensis | SCROPHULARIACEAE |
| | 8 | Pedicularis | lanceolata | SCROPHULARIACEAE |
| | 6 | Peltandra | virginica | ARACEAE |
| | 3 | Penstemon | digitalis | SCROPHULARIACEAE |
| | 6 | Penstemon | hirsutus | SCROPHULARIACEAE |
| E | 8 | Penstemon | laevigatus (incl. P. calycosus) | SCROPHULARIACEAE |
| T | 7 | Penstemon | pallidus | SCROPHULARIACEAE |
| | 3 | Penthorum | sedoides | SAXIFRAGACEAE |
| x | 10 | Perideridia | americana | APIACEAE |
| * | 0 | **Perilla** | **frutescens** | LAMIACEAE |
| * | 0 | **Petasites** | **hybridus** | ASTERACEAE |
| * | 0 | **Petunia** | **x hybrida** | SOLANACEAE |
| x | 10 | Phacelia | dubia | HYDROPHYLLACEAE |
| | 5 | Phacelia | purshii | HYDROPHYLLACEAE |
| | 0 | Phalaris | arundinacea | POACEAE |
| * | 0 | **Phalaris** | **canariensis** | POACEAE |
| | 8 | Phaseolus | polystachios | FABACEAE |
| * | 0 | **Phaseolus** | **vulgaris** | FABACEAE |
| * | 0 | **Philadelphus** | **coronarius** | HYDRANGEACEAE |

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|---|---|---|---|---|
| * | 0 | **Philadelphus** | **pubescens** | HYDRANGEACEAE |
| * | 0 | **Phleum** | **pratense** | POACEAE |
| | 6 | Phlox | divaricata | POLEMONIACEAE |
| | 7 | Phlox | maculata | POLEMONIACEAE |
| T | 8 | Phlox | ovata | POLEMONIACEAE |
| | 4 | Phlox | paniculata | POLEMONIACEAE |
| | 7 | Phlox | pilosa | POLEMONIACEAE |
| | 6 | Phlox | subulata | POLEMONIACEAE |
| | 0 | Phragmites | australis (P. communis) | POACEAE |
| | 5 | Phryma | leptostachya | VERBENACEAE |
| | 6 | Phyla | lanceolata (Lippia l.) | VERBENACEAE |
| * | 0 | **Physalis** | **alkekengii** | SOLANACEAE |
| | 2 | Physalis | heterophylla | SOLANACEAE |
| | 2 | Physalis | longifolia | SOLANACEAE |
| * | 0 | **Physalis** | **pubescens** | SOLANACEAE |
| * | 0 | **Physalis** | **pumila** | SOLANACEAE |
| | 4 | Physocarpus | opulifolius | ROSACEAE |
| ** | 6 | Physostegia | virginiana | LAMIACEAE |
| | 2 | Phytolacca | americana | PHYTOLACCACEAE |
| * | 0 | **Picris** | **echioides** | ASTERACEAE |
| * | 0 | **Picris** | **hieracioides** | ASTERACEAE |
| | 4 | Pilea | fontana | URTICACEAE |
| | 4 | Pilea | pumila | URTICACEAE |
| * | 0 | **Pinus** | **nigra** | PINACEAE |
| ** | 6 | Pinus | strobus | PINACEAE |
| * | 0 | **Pinus** | **sylvestris** | PINACEAE |
| * | 0 | **Plantago** | **aristata** | PLANTAGINACEAE |
| E | 10 | Plantago | cordata | PLANTAGINACEAE |
| * | 0 | **Plantago** | **lanceolata** | PLANTAGINACEAE |
| * | 0 | **Plantago** | **major** | PLANTAGINACEAE |
| * | 0 | **Plantago** | **patagonica (P. purshii)** | PLANTAGINACEAE |
| * | 0 | **Plantago** | **psyllium** | PLANTAGINACEAE |
| | 0 | Plantago | rugelii | PLANTAGINACEAE |
| | 0 | Plantago | virginica | PLANTAGINACEAE |

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|---|---|---|---|---|
| | 7 | Platanus | occidentalis | PLATANACEAE |
| | 4 | Poa | alsodes | POACEAE |
| * | 0 | **Poa** | **annua** | POACEAE |
| * | 0 | **Poa** | **bulbosa** | POACEAE |
| * | 0 | **Poa** | **compressa** | POACEAE |
| | 7 | Poa | cuspidata | POACEAE |
| | 8 | Poa | languida | POACEAE |
| * | 0 | **Poa** | **nemoralis** | POACEAE |
| | 5 | Poa | palustris | POACEAE |
| * | 0 | **Poa** | **pratensis** | POACEAE |
| E | 8 | Poa | saltuensis | POACEAE |
| | 6 | Poa | sylvestris | POACEAE |
| | 5 | Poa | trivialis | POACEAE |
| | 5 | Podophyllum | peltatum | BERBERIDACEAE |
| E | 10 | Podostemum | ceratophyllum | PODOSTEMACEAE |
| T | 10 | Pogonia | ophioglossoides | ORCHIDACEAE |
| | 3 | Polanisia | dodecandra | CAPPARACEAE |
| * | 0 | **Polanisia** | **jamesii (Cristatella j.)** | CAPPARACEAE |
| * | 0 | **Polemonium** | **caeruleum** | POLEMONIACEAE |
| | 6 | Polemonium | reptans | POLEMONIACEAE |
| E | 8 | Polygala | cruciata | POLYGALACEAE |
| E | 8 | Polygala | paucifolia | POLYGALACEAE |
| T | 10 | Polygala | polygama | POLYGALACEAE |
| | 4 | Polygala | sanguinea | POLYGALACEAE |
| | 7 | Polygala | senega | POLYGALACEAE |
| | 4 | Polygala | verticillata | POLYGALACEAE |
| | 5 | Polygonatum | biflorum (incl. P. commutatum) | LILIACEAE |
| | 5 | Polygonatum | pubescens | LILIACEAE |
| * | 0 | **Polygonum** | **achoreum** | POLYGONACEAE |
| | 5 | Polygonum | amphibium | POLYGONACEAE |
| * | 0 | **Polygonum** | **arenastrum** | POLYGONACEAE |
| | 4 | Polygonum | arifolium | POLYGONACEAE |
| * | 0 | **Polygonum** | **aviculare** | POLYGONACEAE |
| * | 0 | **Polygonum** | **caespitosum** | POLYGONACEAE |

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| X | 10 | Polygonum | careyi | POLYGONACEAE |
| E | 9 | Polygonum | cilinode | POLYGONACEAE |
| * | 0 | **Polygonum** | **convolvulus** | POLYGONACEAE |
| * | 0 | **Polygonum** | **cuspidatum** | POLYGONACEAE |
| | 1 | Polygonum | erectum | POLYGONACEAE |
| | 3 | Polygonum | hydropiper | POLYGONACEAE |
| | 5 | Polygonum | hydropiperoides | POLYGONACEAE |
| | 1 | Polygonum | lapathifolium | POLYGONACEAE |
| * | 0 | **Polygonum** | **orientale** | POLYGONACEAE |
| | 1 | Polygonum | pensylvanicum | POLYGONACEAE |
| * | 0 | **Polygonum** | **persicaria** | POLYGONACEAE |
| | 6 | Polygonum | punctatum | POLYGONACEAE |
| * | 0 | **Polygonum** | **robustius** | POLYGONACEAE |
| | 3 | Polygonum | sagittatum | POLYGONACEAE |
| | 2 | Polygonum | scandens var. cristatum | POLYGONACEAE |
| | 2 | Polygonum | scandens var. scandens | POLYGONACEAE |
| | 5 | Polygonum | tenue | POLYGONACEAE |
| | 4 | Polygonum | virginianum | POLYGONACEAE |
| | 5 | Polymnia | canadensis | ASTERACEAE |
| | 8 | Polymnia | uvedalia | ASTERACEAE |
| | 7 | Polypodium | virginianum | POLYPODIACEAE |
| | 4 | Polystichum | acrostichoides | ASPLENIACEAE |
| | 7 | Pontederia | cordata | PONTEDERIACEAE |
| * | 0 | **Populus** | **alba** | SALICACEAE |
| T | 7 | Populus | balsamifera | SALICACEAE |
| | 5 | Populus | deltoides | SALICACEAE |
| | 2 | Populus | grandidentata | SALICACEAE |
| | 8 | Populus | heterophylla | SALICACEAE |
| * | 0 | **Populus** | **nigra** | SALICACEAE |
| | 2 | Populus | tremuloides | SALICACEAE |
| * | 0 | **Populus** | **x canescens** | SALICACEAE |
| * | 0 | **Populus** | **x jackii** | SALICACEAE |
| | 8 | Porteranthus | stipulatus | ROSACEAE |
| | 8 | Porteranthus | trifoliatus | ROSACEAE |

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| * | 0 | **Portulaca** | **oleracea** | PORTULACACEAE |
| | 8 | Potamogeton | amplifolius | POTAMOGETONACEAE |
| * | 0 | **Potamogeton** | **crispus** | POTAMOGETONACEAE |
| | 6 | Potamogeton | diversifolius | POTAMOGETONACEAE |
| | 6 | Potamogeton | epihydrus | POTAMOGETONACEAE |
| | 4 | Potamogeton | foliosus | POTAMOGETONACEAE |
| E | 10 | Potamogeton | friesii | POTAMOGETONACEAE |
| E | 10 | Potamogeton | gramineus | POTAMOGETONACEAE |
| E | 10 | Potamogeton | hillii | POTAMOGETONACEAE |
| | 10 | Potamogeton | illinoensis | POTAMOGETONACEAE |
| | 10 | Potamogeton | natans | POTAMOGETONACEAE |
| | 3 | Potamogeton | nodosus | POTAMOGETONACEAE |
| | 3 | Potamogeton | pectinatus | POTAMOGETONACEAE |
| E | 10 | Potamogeton | praelongus | POTAMOGETONACEAE |
| T | 10 | Potamogeton | pulcher | POTAMOGETONACEAE |
| | 3 | Potamogeton | pusillus (incl. P. berchtoldii) | POTAMOGETONACEAE |
| | 10 | Potamogeton | richardsonii | POTAMOGETONACEAE |
| E | 10 | Potamogeton | robbinsii | POTAMOGETONACEAE |
| T | 10 | Potamogeton | spirillus | POTAMOGETONACEAE |
| X | 10 | Potamogeton | strictifolius | POTAMOGETONACEAE |
| X | 10 | Potamogeton | vaseyi | POTAMOGETONACEAE |
| | 8 | Potamogeton | zosteriformis | POTAMOGETONACEAE |
| | 10 | Potentilla | anserina | ROSACEAE |
| * | 0 | **Potentilla** | **argentea** | ROSACEAE |
| E | 8 | Potentilla | arguta | ROSACEAE |
| | 3 | Potentilla | canadensis | ROSACEAE |
| | 10 | Potentilla | fruticosa | ROSACEAE |
| * | 0 | **Potentilla** | **inclinata** | ROSACEAE |
| * | 0 | **Potentilla** | **intermedia** | ROSACEAE |
| | 1 | Potentilla | norvegica | ROSACEAE |
| T | 10 | Potentilla | palustris | ROSACEAE |
| T | 10 | Potentilla | paradoxa | ROSACEAE |
| * | 0 | **Potentilla** | **recta** | ROSACEAE |
| * | 0 | **Potentilla** | **reptans** | ROSACEAE |

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|---|---|---|---|---|
| | 1 | Potentilla | simplex | ROSACEAE |
| | 5 | Prenanthes | alba | ASTERACEAE |
| | 5 | Prenanthes | altissima | ASTERACEAE |
| E | 10 | Prenanthes | aspera | ASTERACEAE |
| T | 10 | Prenanthes | crepidinea | ASTERACEAE |
| | 8 | Prenanthes | racemosa | ASTERACEAE |
| * | 0 | **Proboscidea** | **louisiana** | PEDALIACEAE |
| | 6 | Proserpinaca | palustris | HALORAGACEAE |
| ** | 0 | Prunella | vulgaris | LAMIACEAE |
| | 5 | Prunus | americana | ROSACEAE |
| * | 0 | **Prunus** | **avium** | ROSACEAE |
| * | 0 | **Prunus** | **cerasus** | ROSACEAE |
| * | 0 | **Prunus** | **mahaleb** | ROSACEAE |
| E | 8 | Prunus | nigra | ROSACEAE |
| | 4 | Prunus | pensylvanica | ROSACEAE |
| * | 0 | **Prunus** | **persica** | ROSACEAE |
| X | 10 | Prunus | pumila var. pumila | ROSACEAE |
| T | 10 | Prunus | pumila var. susquehanae | ROSACEAE |
| | 3 | Prunus | serotina | ROSACEAE |
| * | 0 | **Prunus** | **tomentosa** | ROSACEAE |
| | 2 | Prunus | virginiana | ROSACEAE |
| | 8 | Psoralea | psoralioides | FABACEAE |
| | 6 | Ptelea | trifoliata | RUTACEAE |
| | 3 | Pteridium | aquilinum | DENNSTAEDTIACEAE |
| * | 0 | **Puccinellia** | **distans** | POACEAE |
| | 7 | Puccinellia | pallida | POACEAE |
| | 7 | Pycnanthemum | incanum | LAMIACEAE |
| | 8 | Pycnanthemum | muticum | LAMIACEAE |
| | 3 | Pycnanthemum | tenuifolium | LAMIACEAE |
| E | 9 | Pycnanthemum | verticillatum var. pilosum | LAMIACEAE |
| | 3 | Pycnanthemum | virginianum | LAMIACEAE |
| E | 10 | Pyrola | chlorantha | PYROLACEAE |
| | 6 | Pyrola | elliptica | PYROLACEAE |
| | 7 | Pyrola | rotundifolia | PYROLACEAE |

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| X | 10 | Pyrola | secunda | PYROLACEAE |
| X | 10 | Pyrus | angustifolia (Malus a.) | ROSACEAE |
| * | 0 | **Pyrus** | **communis** | ROSACEAE |
| | 3 | Pyrus | coronaria (Malus c.) | ROSACEAE |
| * | 0 | **Pyrus** | **ioensis** | ROSACEAE |
| * | 0 | **Pyrus** | **malus (Malus pumila)** | ROSACEAE |
| | 7 | Quercus | alba | FAGACEAE |
| | 7 | Quercus | bicolor | FAGACEAE |
| | 6 | Quercus | coccinea | FAGACEAE |
| | 5 | Quercus | imbricaria | FAGACEAE |
| | 6 | Quercus | macrocarpa | FAGACEAE |
| | 5 | Quercus | muehlenbergii | FAGACEAE |
| | 4 | Quercus | palustris | FAGACEAE |
| | 6 | Quercus | prinus | FAGACEAE |
| | 7 | Quercus | rubra | FAGACEAE |
| | 7 | Quercus | velutina | FAGACEAE |
| | 5 | Quercus | x leana | FAGACEAE |
| | 4 | Ranunculus | aboritivus | RANUNCULACEAE |
| * | 0 | **Ranunculus** | **acris** | RANUNCULACEAE |
| | 5 | Ranunculus | allegheniensis | RANUNCULACEAE |
| | 8 | Ranunculus | ambigens | RANUNCULACEAE |
| * | 0 | **Ranunculus** | **bulbosus** | RANUNCULACEAE |
| | 8 | Ranunculus | fascicularis | RANUNCULACEAE |
| * | 0 | **Ranunculus** | **ficaria** | RANUNCULACEAE |
| | 6 | Ranunculus | flabellaris | RANUNCULACEAE |
| | 5 | Ranunculus | hispidus var. hispidus | RANUNCULACEAE |
| | 6 | Ranunculus | hispidus var. nitidus (R. septentrionalis) | RANUNCULACEAE |
| | 7 | Ranunculus | longirostris | RANUNCULACEAE |
| | 6 | Ranunculus | micranthus | RANUNCULACEAE |
| | 3 | Ranunculus | pensylvanicus | RANUNCULACEAE |
| | 3 | Ranunculus | recurvatus | RANUNCULACEAE |
| * | 0 | **Ranunculus** | **repens** | RANUNCULACEAE |
| | 2 | Ranunculus | sceleratus | RANUNCULACEAE |
| * | 0 | **Ranunculus** | **testiculatus** | RANUNCULACEAE |

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| * | 0 | **Raphanus** | **raphanistrum** | BRASSICACEAE |
| * | 0 | **Raphanus** | **sativus** | BRASSICACEAE |
| | 7 | Ratibida | pinnata | ASTERACEAE |
| * | 0 | **Reseda** | **luteola** | RESEDACEAE |
| | 8 | Rhamnus | alnifolia | RHAMNACEAE |
| * | 0 | **Rhamnus** | **cathartica** | RHAMNACEAE |
| * | 0 | **Rhamnus** | **frangula** | RHAMNACEAE |
| | 6 | Rhamnus | lanceolata | RHAMNACEAE |
| | 8 | Rhexia | virginica | MELASTOMATACEAE |
| | 8 | Rhododendron | prinophyllum (R. nudiflorum var. roseum) | ERICACEAE |
| X | 10 | Rhus | aromatica var. arenaria | ANACARDIACEAE |
| | 4 | Rhus | aromatica var. aromatica | ANACARDIACEAE |
| | 6 | Rhus | copallina | ANACARDIACEAE |
| | 2 | Rhus | glabra | ANACARDIACEAE |
| | 2 | Rhus | typhina | ANACARDIACEAE |
| | 10 | Rhynchospora | alba | CYPERACEAE |
| | 9 | Rhynchospora | capillacea | CYPERACEAE |
| | 9 | Rhynchospora | capitellata | CYPERACEAE |
| | 6 | Ribes | americanum | GROSSULARIACEAE |
| | 5 | Ribes | cynosbati | GROSSULARIACEAE |
| X | 10 | Ribes | glandulosum | GROSSULARIACEAE |
| * | 0 | **Ribes** | **grossularia** | GROSSULARIACEAE |
| | 10 | Ribes | hirtellum | GROSSULARIACEAE |
| * | 0 | **Ribes** | **odoratum** | GROSSULARIACEAE |
| * | 0 | **Ribes** | **sativum** | GROSSULARIACEAE |
| E | 8 | Ribes | triste | GROSSULARIACEAE |
| * | 0 | **Ricinus** | **communis** | EUPHORBIACEAE |
| * | 0 | **Robinia** | **hispida** | FABACEAE |
| ** | 0 | Robinia | pseudoacacia | FABACEAE |
| * | 0 | **Robinia** | **viscosa** | FABACEAE |
| * | 0 | **Rorippa** | **nasturtium-aquaticum (Nasturtium officinale)** | BRASSICACEAE |
| | 1 | Rorippa | palustris | BRASSICACEAE |
| * | 0 | **Rorippa** | **sylvestris** | BRASSICACEAE |
| | 8 | Rosa | blanda | ROSACEAE |

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| * | 0 | **Rosa** | **canina** | ROSACEAE |
| | 5 | Rosa | carolina | ROSACEAE |
| * | 0 | **Rosa** | **eglanteria** | ROSACEAE |
| * | 0 | **Rosa** | **majalis** (R. cinnamomea) | ROSACEAE |
| * | 0 | **Rosa** | **micrantha** | ROSACEAE |
| * | 0 | **Rosa** | **multiflora** | ROSACEAE |
| | 4 | Rosa | palustris | ROSACEAE |
| * | 0 | **Rosa** | **rugosa** | ROSACEAE |
| | 6 | Rosa | setigera | ROSACEAE |
| * | 0 | **Rosa** | **wichuriana** | ROSACEAE |
| | 5 | Rotala | ramosior | LYTHRACEAE |
| | 1 | Rubus | allegheniensis | ROSACEAE |
| | 2 | Rubus | flagellaris | ROSACEAE |
| | 5 | Rubus | hispidus | ROSACEAE |
| | 6 | Rubus | idaeus (R. strigosus) | ROSACEAE |
| * | 0 | **Rubus** | **laciniatus** | ROSACEAE |
| | 1 | Rubus | occidentalis | ROSACEAE |
| | 5 | Rubus | odoratus | ROSACEAE |
| | 2 | Rubus | pensylvanicus | ROSACEAE |
| | 6 | Rubus | pubescens | ROSACEAE |
| X | 10 | Rubus | setosus | ROSACEAE |
| | 7 | Rudbeckia | fulgida | ASTERACEAE |
| | 3 | Rudbeckia | hirta | ASTERACEAE |
| | 5 | Rudbeckia | laciniata | ASTERACEAE |
| | 6 | Rudbeckia | triloba | ASTERACEAE |
| | 3 | Ruellia | strepens | ACANTHACEAE |
| * | 0 | **Rumex** | **acetosella** | POLYGONACEAE |
| | 2 | Rumex | altissimus | POLYGONACEAE |
| * | 0 | **Rumex** | **conglomeratus** | POLYGONACEAE |
| * | 0 | **Rumex** | **crispus** | POLYGONACEAE |
| * | 0 | **Rumex** | **maritimus** | POLYGONACEAE |
| * | 0 | **Rumex** | **obtusifolius** | POLYGONACEAE |
| | 3 | Rumex | orbiculatus | POLYGONACEAE |
| | 5 | Rumex | verticillatus | POLYGONACEAE |

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| * | 0 | **Ruppia** | **maritima** | RUPPIACEAE |
| | 5 | Sabatia | angularis | GENTIANACEAE |
| ** | 0 | Sagina | decumbens | CARYOPHYLLACEAE |
| * | 0 | **Sagina** | **procumbens** | CARYOPHYLLACEAE |
| | 7 | Sagittaria | brevirostra | ALISMATACEAE |
| T | 7 | Sagittaria | calycina (Lophotocarpus c.) | ALISMATACEAE |
| E | 8 | Sagittaria | cuneata | ALISMATACEAE |
| E | 8 | Sagittaria | graminea | ALISMATACEAE |
| | 2 | Sagittaria | latifolia | ALISMATACEAE |
| T | 7 | Sagittaria | rigida | ALISMATACEAE |
| * | 0 | **Salicornia** | **europaea** | CHENOPODIACEAE |
| * | 0 | **Salix** | **alba** | SALICACEAE |
| | 4 | Salix | amygdaloides | SALICACEAE |
| * | 0 | **Salix** | **babylonica** | SALICACEAE |
| | 8 | Salix | bebbiana | SALICACEAE |
| T | 10 | Salix | candida | SALICACEAE |
| | 3 | Salix | discolor | SALICACEAE |
| | 1 | Salix | eriocephala | SALICACEAE |
| | 1 | Salix | exigua | SALICACEAE |
| * | 0 | **Salix** | **fragilis** | SALICACEAE |
| | 4 | Salix | humilis | SALICACEAE |
| | 4 | Salix | lucida | SALICACEAE |
| | 9 | Salix | myricoides | SALICACEAE |
| | 3 | Salix | nigra | SALICACEAE |
| | 4 | Salix | occidentalis (S. tristis) | SALICACEAE |
| E | 10 | Salix | pedicellaris | SALICACEAE |
| T | 8 | Salix | petiolaris | SALICACEAE |
| * | 0 | **Salix** | **purpurea** | SALICACEAE |
| | 4 | Salix | sericea | SALICACEAE |
| | 10 | Salix | serissima | SALICACEAE |
| | 4 | Salix | x subsericea | SALICACEAE |
| * | 0 | **Salsola** | **kali** | CHENOPODIACEAE |
| * | 0 | **Salvia** | **azurea** | LAMIACEAE |
| * | 0 | **Salvia** | **lyrata** | LAMIACEAE |

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| * | 0 | **Salvia** | **officinalis** | LAMIACEAE |
| * | 0 | **Salvia** | **pratensis** | LAMIACEAE |
| * | 0 | **Salvia** | **reflexa** | LAMIACEAE |
| * | 0 | **Salvia** | **x superba** | LAMIACEAE |
| | 3 | Sambucus | canadensis | CAPRIFOLIACEAE |
| | 6 | Sambucus | racemosa (S. pubens) | CAPRIFOLIACEAE |
| | 5 | Samolus | floribundus (S. parviflorus) | PRIMULACEAE |
| | 5 | Sanguinaria | canadensis | PAPAVERACEAE |
| | 8 | Sanguisorba | canadensis | ROSACEAE |
| | 4 | Sanicula | canadensis | APIACEAE |
| | 4 | Sanicula | gregaria | APIACEAE |
| | 5 | Sanicula | marilandica | APIACEAE |
| | 5 | Sanicula | trifoliata | APIACEAE |
| * | 0 | **Saponaria** | **officinalis** | CARYOPHYLLACEAE |
| T | 10 | Sarracenia | purpurea | SARRACENIACEAE |
| | 4 | Sassafras | albidum | LAURACEAE |
| | 8 | Satureja | glabella var. angustifolia (S. arkansana) | LAMIACEAE |
| * | 0 | **Satureja** | **hortensis** | LAMIACEAE |
| | 3 | Satureja | vulgaris (Clinopodium v.) | LAMIACEAE |
| | 7 | Saururus | cernuus | SAURURACEAE |
| | 6 | Saxifraga | pensylvanica | SAXIFRAGACEAE |
| | 8 | Saxifraga | virginiensis | SAXIFRAGACEAE |
| E | 10 | Scheuchzeria | palustris | SCHEUCHZERIACEAE |
| E | 10 | Schizachne | purpurascens | POACEAE |
| | 6 | Schizachyrium | scoparium (Andropogon s.) | POACEAE |
| * | 0 | **Scilla** | **non-scripta** | LILIACEAE |
| | 5 | Scirpus | acutus | CYPERACEAE |
| | 5 | Scirpus | americanus | CYPERACEAE |
| | 2 | Scirpus | atrovirens | CYPERACEAE |
| | 1 | Scirpus | cyperinus | CYPERACEAE |
| T | 9 | Scirpus | expansus | CYPERACEAE |
| | 5 | Scirpus | fluviatilis | CYPERACEAE |
| | 6 | Scirpus | pendulus | CYPERACEAE |
| | 4 | Scirpus | polyphyllus | CYPERACEAE |

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| E | 8 | Scirpus | smithii (S. purshianus) | CYPERACEAE |
| X | 10 | Scirpus | torreyi | CYPERACEAE |
| | 6 | Scirpus | validus | CYPERACEAE |
| | 7 | Scirpus | verecundus | CYPERACEAE |
| * | 0 | **Scleranthus** | **annuus** | CARYOPHYLLACEAE |
| T | 10 | Scleria | pauciflora | CYPERACEAE |
| | 8 | Scleria | triglomerata | CYPERACEAE |
| | 10 | Scleria | verticillata | CYPERACEAE |
| | 5 | Scrophularia | lanceolata | SCROPHULARIACEAE |
| | 5 | Scrophularia | marilandica | SCROPHULARIACEAE |
| | 6 | Scutellaria | galericulata (S. epilobiifolia) | LAMIACEAE |
| | 6 | Scutellaria | incana | LAMIACEAE |
| | 3 | Scutellaria | lateriflora | LAMIACEAE |
| | 6 | Scutellaria | nervosa var. calvifolia | LAMIACEAE |
| | 7 | Scutellaria | ovata | LAMIACEAE |
| * | 0 | **Secale** | **cereale** | POACEAE |
| * | 0 | **Sedum** | **acre** | CRASSULACEAE |
| * | 0 | **Sedum** | **album** | CRASSULACEAE |
| * | 0 | **Sedum** | **purpureum (S. telephium)** | CRASSULACEAE |
| * | 0 | **Sedum** | **sarmentosum** | CRASSULACEAE |
| | 5 | Sedum | ternatum | CRASSULACEAE |
| | 9 | Selaginella | apoda | SELAGINELLACEAE |
| E | 10 | Selaginella | rupestris | SELAGINELLACEAE |
| | 3 | Senecio | anonymus | ASTERACEAE |
| | 5 | Senecio | aureus | ASTERACEAE |
| * | 0 | **Senecio** | **glabellus** | ASTERACEAE |
| | 5 | Senecio | obovatus | ASTERACEAE |
| T | 9 | Senecio | pauperculus | ASTERACEAE |
| | 5 | Senecio | plattensis | ASTERACEAE |
| * | 0 | **Senecio** | **sylvaticus** | ASTERACEAE |
| * | 0 | **Senecio** | **vulgaris** | ASTERACEAE |
| | 5 | Senna | hebecarpa (Cassia h.) | CAESALPINIACEAE |
| | 4 | Senna | marilandica (Cassia m.) | CAESALPINIACEAE |
| * | 0 | **Setaria** | **faberi** | POACEAE |

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|---|---|---|---|---|
| * | 0 | **Setaria** | **glauca** | POACEAE |
| * | 0 | **Setaria** | **italica** | POACEAE |
| * | 0 | **Setaria** | **verticillata** | POACEAE |
| * | 0 | **Setaria** | **viridis** | POACEAE |
| | 8 | Shepherdia | canadensis | ELAEAGNACEAE |
| * | 0 | **Sherardia** | **arvensis** | RUBIACEAE |
| | 5 | Sicyos | angulatus | CUCURBITACEAE |
| * | 0 | **Sida** | **spinosa** | MALVACEAE |
| | 2 | Silene | antirrhina | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **armeria** | CARYOPHYLLACEAE |
| T | 9 | Silene | caroliniana var. pensylvanica | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **conica** | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **cserei** | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **dichotoma** | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **dioica (Lychnis d.)** | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **latifolia (S. pratensis)** | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **noctiflora** | CARYOPHYLLACEAE |
| | 6 | Silene | stellata | CARYOPHYLLACEAE |
| | 7 | Silene | virginica | CARYOPHYLLACEAE |
| * | 0 | **Silene** | **vulgaris** | CARYOPHYLLACEAE |
| E | 9 | Silphium | laciniatum | ASTERACEAE |
| | 6 | Silphium | perfoliatum | ASTERACEAE |
| | 9 | Silphium | terebinthinaceum | ASTERACEAE |
| | 8 | Silphium | trifoliatum | ASTERACEAE |
| * | 0 | **Silybum** | **marianum** | ASTERACEAE |
| * | 0 | **Sinapis** | **alba (Brassica a.)** | BRASSICACEAE |
| * | 0 | **Sinapis** | **arvensis (Brassica kaber)** | BRASSICACEAE |
| * | 0 | **Sisymbrium** | **altissimum** | BRASSICACEAE |
| * | 0 | **Sisymbrium** | **officinale** | BRASSICACEAE |
| | 6 | Sisyrinchium | albidum | IRIDACEAE |
| | 4 | Sisyrinchium | angustifolium | IRIDACEAE |
| E | 10 | Sisyrinchium | atlanticum | IRIDACEAE |
| X | 10 | Sisyrinchium | montanum | IRIDACEAE |
| E | 10 | Sisyrinchium | mucronatum | IRIDACEAE |

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|---|---|---|---|---|
| | 5 | Sium | suave | APIACEAE |
| | 5 | Smilacina | racemosa | LILIACEAE |
| | 9 | Smilacina | stellata | LILIACEAE |
| X | 10 | Smilacina | trifolia | LILIACEAE |
| | 6 | Smilax | ecirrhata | SMILACACEAE |
| | 6 | Smilax | glauca | SMILACACEAE |
| | 4 | Smilax | herbacea | SMILACACEAE |
| | 5 | Smilax | hispida | SMILACACEAE |
| | 4 | Smilax | rotundifolia | SMILACACEAE |
| * | 0 | **Solanum** | **carolinense** | SOLANACEAE |
| * | 0 | **Solanum** | **dulcamara** | SOLANACEAE |
| | 1 | Solanum | nigrum | SOLANACEAE |
| * | 0 | **Solanum** | **rostratum** | SOLANACEAE |
| * | 0 | **Solanum** | **sarrachoides** | SOLANACEAE |
| * | 0 | **Solanum** | **tuberosum** | SOLANACEAE |
| | 4 | Solidago | bicolor | ASTERACEAE |
| | 5 | Solidago | caesia | ASTERACEAE |
| | 1 | Solidago | canadensis | ASTERACEAE |
| | 6 | Solidago | flexicaulis | ASTERACEAE |
| | 2 | Solidago | gigantea | ASTERACEAE |
| | 5 | Solidago | hispida | ASTERACEAE |
| | 2 | Solidago | juncea | ASTERACEAE |
| | 3 | Solidago | nemoralis | ASTERACEAE |
| | 10 | Solidago | ohioensis | ASTERACEAE |
| | 8 | Solidago | patula | ASTERACEAE |
| | 10 | Solidago | ptarmicoides | ASTERACEAE |
| | 8 | Solidago | riddellii | ASTERACEAE |
| | 7 | Solidago | rigida | ASTERACEAE |
| | 3 | Solidago | rugosa | ASTERACEAE |
| * | 0 | **Solidago** | **sempervirens** | ASTERACEAE |
| | 5 | Solidago | speciosa | ASTERACEAE |
| T | 8 | Solidago | squarrosa | ASTERACEAE |
| | 8 | Solidago | uliginosa | ASTERACEAE |
| | 6 | Solidago | ulmifolia | ASTERACEAE |

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|---|---|---|---|---|
| * | 0 | **Sonchus** | **arvensis** | ASTERACEAE |
| * | 0 | **Sonchus** | **asper** | ASTERACEAE |
| * | 0 | **Sonchus** | **oleraceus** | ASTERACEAE |
| * | 0 | **Sorbaria** | **sorbifolia** | ROSACEAE |
| * | 0 | **Sorbus** | **aucuparia** | ROSACEAE |
| E | 8 | Sorbus | decora | ROSACEAE |
| | 6 | Sorghastrum | nutans | POACEAE |
| * | 0 | **Sorghum** | **bicolor** | POACEAE |
| * | 0 | **Sorghum** | **halepense** | POACEAE |
| | 5 | Sparganium | americanum | SPARGANIACEAE |
| E | 9 | Sparganium | androcladum | SPARGANIACEAE |
| | 4 | Sparganium | eurycarpum | SPARGANIACEAE |
| | 7 | Spartina | pectinata | POACEAE |
| * | 0 | **Spergula** | **arvensis** | CARYOPHYLLACEAE |
| * | 0 | **Spergularia** | **marina** | CARYOPHYLLACEAE |
| * | 0 | **Spergularia** | **media** | CARYOPHYLLACEAE |
| * | 0 | **Spergularia** | **rubra** | CARYOPHYLLACEAE |
| | 8 | Sphenopholis | nitida | POACEAE |
| | 5 | Sphenopholis | obtusata var. major (S. intermedia) | POACEAE |
| T | 7 | Sphenopholis | obtusata var. obtusata | POACEAE |
| | 8 | Sphenopholis | pensylvanica (Trisetum p.) | POACEAE |
| | 3 | Spiraea | alba var. alba | ROSACEAE |
| X | 10 | Spiraea | alba var. latifolia | ROSACEAE |
| | 4 | Spiraea | tomentosa | ROSACEAE |
| * | 0 | **Spiraea** | **x vanhouttei** | ROSACEAE |
| | 5 | Spiranthes | cernua var. cernua | ORCHIDACEAE |
| | 5 | Spiranthes | cernua var. ochroleuca | ORCHIDACEAE |
| | 6 | Spiranthes | lacera var. gracilis | ORCHIDACEAE |
| | 5 | Spiranthes | lacera var. lacera | ORCHIDACEAE |
| | 8 | Spiranthes | lucida | ORCHIDACEAE |
| | 9 | Spiranthes | magnicamporum | ORCHIDACEAE |
| E | 10 | Spiranthes | romanzoffiana | ORCHIDACEAE |
| | 6 | Spiranthes | tuberosa | ORCHIDACEAE |
| | 8 | Spiranthes | vernalis | ORCHIDACEAE |

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| | 5 | Spirodela | polyrhiza | LEMNACEAE |
| | 3 | Sporobolus | asper | POACEAE |
| | 8 | Sporobolus | cryptandrus | POACEAE |
| | 3 | Sporobolus | neglectus | POACEAE |
| | 5 | Sporobolus | vaginiflorus | POACEAE |
| * | 0 | **Stachys** | **aspera** | LAMIACEAE |
| | 7 | Stachys | cordata (S. nuttallii) | LAMIACEAE |
| * | 0 | **Stachys** | **germanica** | LAMIACEAE |
| | 6 | Stachys | palustris | LAMIACEAE |
| | 4 | Stachys | tenuifolia | LAMIACEAE |
| | 6 | Staphylea | trifolia | STAPHYLEACEAE |
| * | 0 | **Stellaria** | **aquatica (Myosoton a.)** | CARYOPHYLLACEAE |
| * | 0 | **Stellaria** | **graminea** | CARYOPHYLLACEAE |
| | 5 | Stellaria | longifolia | CARYOPHYLLACEAE |
| * | 0 | **Stellaria** | **media** | CARYOPHYLLACEAE |
| | 5 | Stellaria | pubera | CARYOPHYLLACEAE |
| T | 9 | Stenanthium | gramineum | LILIACEAE |
| T | 10 | Stipa | spartea | POACEAE |
| E | 10 | Streptopus | roseus | LILIACEAE |
| | 3 | Strophostyles | helvola | FABACEAE |
| | 6 | Stylophorum | diphyllum | PAPAVERACEAE |
| * | 0 | **Suaeda** | **calceoliformis** | CHENOPODIACEAE |
| X | 10 | Symphoricarpos | albus var. albus | CAPRIFOLIACEAE |
| * | 0 | **Symphoricarpos** | **albus var. laevigarus** | CAPRIFOLIACEAE |
| * | 0 | **Symphoricarpos** | **occidentalis** | CAPRIFOLIACEAE |
| | 4 | Symphoricarpos | orbiculatus | CAPRIFOLIACEAE |
| * | 0 | **Symphytum** | **asperum** | BORAGINACEAE |
| * | 0 | **Symphytum** | **officinale** | BORAGINACEAE |
| | 6 | Symplocarpus | foetidus | ARACEAE |
| * | 0 | **Syringa** | **vulgaris** | OLEACEAE |
| | 6 | Taenidia | integerrima | APIACEAE |
| * | 0 | **Tamarix** | **gallica** | TAMARICACEAE |
| * | 0 | **Tanacetum** | **vulgare** | ASTERACEAE |
| * | 0 | **Taraxacum** | **laevigatum** | ASTERACEAE |

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| * | 0 | **Taraxacum** | **officinale** | ASTERACEAE |
| * | 0 | **Taxodium** | **distichum** | TAXODIACEAE |
| | 9 | Taxus | canadensis | TAXACEAE |
| | 6 | Tephrosia | virginiana | FABACEAE |
| | 3 | Teucrium | canadense var. canadense | LAMIACEAE |
| | 4 | Teucrium | canadense var. occidentale | LAMIACEAE |
| | 7 | Thalictrum | dasycarpum | RANUNCULACEAE |
| | 6 | Thalictrum | dioicum | RANUNCULACEAE |
| | 4 | Thalictrum | pubescens | RANUNCULACEAE |
| | 7 | Thalictrum | revolutum | RANUNCULACEAE |
| | 4 | Thaspium | barbinode | APIACEAE |
| | 3 | Thaspium | trifoliatum | APIACEAE |
| | 7 | Thelypteris | hexagonoptera | THELYPTERIDACEAE |
| | 5 | Thelypteris | noveboracensis | THELYPTERIDACEAE |
| | 5 | Thelypteris | palustris | THELYPTERIDACEAE |
| | 9 | Thelypteris | phegopteris | THELYPTERIDACEAE |
| * | 0 | **Thlaspi** | **arvense** | BRASSICACEAE |
| * | 0 | **Thlaspi** | **perfoliatum** | BRASSICACEAE |
| ** | 0 | Thuja | occidentalis | CUPRESSACEAE |
| * | 0 | **Thymus** | **serpyllum** | LAMIACEAE |
| | 5 | Tiarella | cordifolia | SAXIFRAGACEAE |
| | 6 | Tilia | americana | TILIACEAE |
| | 8 | Tipularia | discolor | ORCHIDACEAE |
| | 10 | Tofieldia | glutinosa | LILIACEAE |
| * | 0 | **Torilis** | **japonica** | APIACEAE |
| | 1 | Toxicodendron | radicans (Rhus r.) | ANACARDIACEAE |
| | 7 | Toxicodendron | rydbergii (Rhus radicans) | ANACARDIACEAE |
| | 8 | Toxicodendron | vernix (Rhus v.) | ANACARDIACEAE |
| * | 0 | **Tradescantia** | **bracteata** | COMMELINACEAE |
| | 7 | Tradescantia | ohiensis | COMMELINACEAE |
| | 8 | Tradescantia | virginiana | COMMELINACEAE |
| * | 0 | **Tragopogon** | **dubius** | ASTERACEAE |
| * | 0 | **Tragopogon** | **porrifolius** | ASTERACEAE |
| * | 0 | **Tragopogon** | **pratensis** | ASTERACEAE |

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| | 8 | Triadenum | fraseri (Hypericum f.) | CLUSIACEAE |
| | 7 | Triadenum | virginicum (Hypericum v.) | CLUSIACEAE |
| * | 0 | **Tribulus** | **terrestris** | ZYGOPHYLLACEAE |
| | 8 | Trichostema | dichotomum | LAMIACEAE |
| E | 9 | Trichostema | setaceum (T. lineare) | LAMIACEAE |
| | 3 | Tridens | flavus | POACEAE |
| | 9 | Trientalis | borealis | PRIMULACEAE |
| * | 0 | **Trifolium** | **arvense** | FABACEAE |
| * | 0 | **Trifolium** | **aureum** | FABACEAE |
| * | 0 | **Trifolium** | **campestre** | FABACEAE |
| * | 0 | **Trifolium** | **dubium** | FABACEAE |
| * | 0 | **Trifolium** | **hybridum** | FABACEAE |
| * | 0 | **Trifolium** | **incarnatum** | FABACEAE |
| * | 0 | **Trifolium** | **pratense** | FABACEAE |
| E | 8 | Trifolium | reflexum | FABACEAE |
| * | 0 | **Trifolium** | **repens** | FABACEAE |
| T | 9 | Triglochin | maritimum | JUNCAGINACEAE |
| | 9 | Triglochin | palustre | JUNCAGINACEAE |
| X | 10 | Trillium | cernuum | LILIACEAE |
| | 7 | Trillium | erectum | LILIACEAE |
| | 7 | Trillium | flexipes | LILIACEAE |
| | 6 | Trillium | grandiflorum | LILIACEAE |
| | 7 | Trillium | sessile | LILIACEAE |
| T | 9 | Trillium | undulatum | LILIACEAE |
| | 3 | Triodanis | perfoliata | CAMPANULACEAE |
| | 5 | Triosteum | aurantiacum | CAPRIFOLIACEAE |
| | 5 | Triosteum | perfoliatum | CAPRIFOLIACEAE |
| T | 8 | Triphora | trianthophora | ORCHIDACEAE |
| | 9 | Triplasis | purpurea | POACEAE |
| * | 0 | **Triticum** | **aestivum** | POACEAE |
| E | 8 | Trollius | laxus | RANUNCULACEAE |
| | 8 | Tsuga | canadensis | PINACEAE |
| * | 0 | **Tulipa** | **gesneria** | LILIACEAE |
| * | 0 | **Tussilago** | **farfara** | ASTERACEAE |

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| | 0 | Typha | angustifolia | TYPHACEAE |
| | 2 | Typha | latifolia | TYPHACEAE |
| | 0 | Typha | x glauca | TYPHACEAE |
| | 1 | Ulmus | americana | ULMACEAE |
| | 2 | Ulmus | rubra | ULMACEAE |
| E | 8 | Ulmus | thomasii | ULMACEAE |
| | 1 | Urtica | dioica | URTICACEAE |
| E | 10 | Utricularia | cornuta | LENTIBULARIACEAE |
| | 10 | Utricularia | geminiscapa | LENTIBULARIACEAE |
| | 10 | Utricularia | gibba | LENTIBULARIACEAE |
| T | 8 | Utricularia | intermedia | LENTIBULARIACEAE |
| T | 8 | Utricularia | minor | LENTIBULARIACEAE |
| | 7 | Utricularia | vulgaris | LENTIBULARIACEAE |
| | 5 | Uvularia | grandiflora | LILIACEAE |
| | 5 | Uvularia | perfoliata | LILIACEAE |
| | 5 | Uvularia | sessilifolia | LILIACEAE |
| * | 0 | **Vaccaria** | **hispanica** | CARYOPHYLLACEAE |
| | 7 | Vaccinium | angustifolium | ERICACEAE |
| | 5 | Vaccinium | corymbosum | ERICACEAE |
| | 8 | Vaccinium | macrocarpon | ERICACEAE |
| E | 10 | Vaccinium | myrtilloides | ERICACEAE |
| E | 9 | Vaccinium | oxycoccos | ERICACEAE |
| | 6 | Vaccinium | pallidum | ERICACEAE |
| | 7 | Vaccinium | stamineum | ERICACEAE |
| * | 0 | **Valeriana** | **officinalis** | VALERIANACEAE |
| | 7 | Valeriana | pauciflora | VALERIANACEAE |
| X | 10 | Valeriana | uliginosa | VALERIANACEAE |
| | 4 | Valerianella | chenopodifolia | VALERIANACEAE |
| * | 0 | **Valerianella** | **locusta** | VALERIANACEAE |
| * | 0 | **Valerianella** | **radiata** | VALERIANACEAE |
| | 3 | Valerianella | umbilicata | VALERIANACEAE |
| | 8 | Vallisneria | americana | HYDROCHARITACEAE |
| | 10 | Veratrum | viride | LILIACEAE |
| * | 0 | **Verbascum** | **blattaria** | SCROPHULARIACEAE |

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| * | 0 | **Verbascum** | **thapsus** | SCROPHULARIACEAE |
| * | 0 | **Verbena** | **bracteata** | VERBENACEAE |
| * | 0 | **Verbena** | **canadensis** | VERBENACEAE |
| | 4 | Verbena | hastata | VERBENACEAE |
| | 5 | Verbena | simplex | VERBENACEAE |
| | 5 | Verbena | stricta | VERBENACEAE |
| | 4 | Verbena | urticifolia | VERBENACEAE |
| | 4 | Verbena | x engelmannii | VERBENACEAE |
| | 4 | Verbesina | alternifolia | ASTERACEAE |
| * | 0 | **Verbesina** | **virginica** | ASTERACEAE |
| | 7 | Vernonia | fasciculata | ASTERACEAE |
| | 3 | Vernonia | gigantea | ASTERACEAE |
| E | 7 | Vernonia | missurica | ASTERACEAE |
| * | 0 | **Veronica** | **agrestis** | SCROPHULARIACEAE |
| | 3 | Veronica | americana | SCROPHULARIACEAE |
| | 6 | Veronica | anagallis-aquatica | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **arvensis** | SCROPHULARIACEAE |
| | 3 | Veronica | catenata | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **chamaedrys** | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **filiformis** | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **hederaefolia** | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **longifolia** | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **officinalis** | SCROPHULARIACEAE |
| | 1 | Veronica | peregrina | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **persica** | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **polita** | SCROPHULARIACEAE |
| | 4 | Veronica | scutellata | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **serpyllifolia** | SCROPHULARIACEAE |
| * | 0 | **Veronica** | **teucrium (V. latifolia)** | SCROPHULARIACEAE |
| | 9 | Veronicastrum | virginicum | SCROPHULARIACEAE |
| | 6 | Viburnum | acerifolium | CAPRIFOLIACEAE |
| | 10 | Viburnum | alnifolium | CAPRIFOLIACEAE |
| | 2 | Viburnum | dentatum var. dentatum | CAPRIFOLIACEAE |
| | 2 | Viburnum | dentatum var. lucidum (V. recognitum) | CAPRIFOLIACEAE |

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| * | 0 | **Viburnum** | **lantana** | CAPRIFOLIACEAE |
| | 6 | Viburnum | lentago | CAPRIFOLIACEAE |
| | 7 | Viburnum | nudum var. cassinoides (V. cassinoides) | CAPRIFOLIACEAE |
| T | 8 | Viburnum | opulus var. americanum | CAPRIFOLIACEAE |
| * | 0 | **Viburnum** | **opulus var. opulus** | CAPRIFOLIACEAE |
| | 5 | Viburnum | prunifolium | CAPRIFOLIACEAE |
| | 8 | Viburnum | rafinesquianum var. affine | CAPRIFOLIACEAE |
| | 8 | Viburnum | rafinesquianum var. rafinesquianum | CAPRIFOLIACEAE |
| | 5 | Vicia | americana | FABACEAE |
| * | 0 | **Vicia** | **angustifolia** | FABACEAE |
| | 7 | Vicia | caroliniana | FABACEAE |
| * | 0 | **Vicia** | **cracca** | FABACEAE |
| * | 0 | **Vicia** | **hirsuta** | FABACEAE |
| * | 0 | **Vicia** | **sativa** | FABACEAE |
| * | 0 | **Vicia** | **villosa** | FABACEAE |
| * | 0 | **Vinca** | **minor** | APOCYNACEAE |
| * | 0 | **Vincetoxicum** | **nigrum (Cynanchum n.)** | ASCLEPIADACEAE |
| * | 0 | **Viola** | **arvensis** | VIOLACEAE |
| | 5 | Viola | blanda (incl. V. incognita) | VIOLACEAE |
| | 5 | Viola | canadensis | VIOLACEAE |
| | 6 | Viola | conspersa | VIOLACEAE |
| | 7 | Viola | cucullata | VIOLACEAE |
| | 8 | Viola | hastata | VIOLACEAE |
| | 9 | Viola | lanceolata | VIOLACEAE |
| | 8 | Viola | macloskeyi var. pallens | VIOLACEAE |
| E | 10 | Viola | nephrophylla | VIOLACEAE |
| * | 0 | **Viola** | **odorata** | VIOLACEAE |
| | 6 | Viola | palmata (incl. V. triloba) | VIOLACEAE |
| T | 9 | Viola | pedata | VIOLACEAE |
| E | 8 | Viola | primulifolia | VIOLACEAE |
| | 5 | Viola | pubescens | VIOLACEAE |
| | 3 | Viola | rafinesquii | VIOLACEAE |
| | 6 | Viola | rostrata | VIOLACEAE |
| | 8 | Viola | rotundifolia | VIOLACEAE |

| | | | | |
|---|---|---|---|---|
| | 6 | Viola | sagittata (incl. V. fimbriatula) | VIOLACEAE |
| | 2 | Viola | sororia (incl. V. affinis) | VIOLACEAE |
| | 5 | Viola | striata | VIOLACEAE |
| * | 0 | **Viola** | **tricolor** | VIOLACEAE |
| | 8 | Viola | villosa (V. hirsutula) | VIOLACEAE |
| | 6 | Viola | x brauniae | VIOLACEAE |
| | 6 | Vitis | aestivalis | VITACEAE |
| | 8 | Vitis | labrusca | VITACEAE |
| | 4 | Vitis | riparia | VITACEAE |
| | 3 | Vitis | vulpina | VITACEAE |
| | 10 | Vittaria | lineata | ADIANTACEAE |
| | 5 | Vulpina | octoflora (Festuca o.) | POACEAE |
| | 7 | Waldsteinia | fragarioides | ROSACEAE |
| | 6 | Wolffia | columbiana | LEMNACEAE |
| | 10 | Wolffia | papulifera | LEMNACEAE |
| | 6 | Wolffia | punctata | LEMNACEAE |
| T | 8 | Wolffiella | floridana | LEMNACEAE |
| | 9 | Woodsia | obtusa | ASPLENIACEAE |
| T | 8 | Woodwardia | areolata | BLECHNACEAE |
| | 9 | Woodwardia | virginica | BLECHNACEAE |
| * | 0 | **Xanthium** | **spinosum** | ASTERACEAE |
| * | 0 | **Xanthium** | **strumarium** | ASTERACEAE |
| E | 10 | Xyris | difformis | XYRIDACEAE |
| T | 8 | Xyris | torta | XYRIDACEAE |
| * | 0 | **Yucca** | **filamentosa** | AGAVACEAE |
| | 8 | Zannichellia | palustris | ZANNICHELLIACEAE |
| | 5 | Zanthoxylum | americanum | RUTACEAE |
| * | 0 | **Zea** | **mays** | POACEAE |
| T | 8 | Zizania | aquatica | POACEAE |
| | 7 | Zizia | aurea | APIACEAE |
| | 10 | Zygadenus | elegans var. glaucus | LILIACEAE |

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The Floristic Quality Assessment System was developed as a tool to provide a numerical value (Floristic Quality Assessment Index) for a natural area evaluation based on plant species present. The index allows for objective numerical comparison of two unrelated plant community types.

A numerical rating, called the coefficient of conservation was assigned to 2,063 species of plants and 30 interspecific hybrids (Appendix A). Appendix A contains a checklist of the vascular flora of 31 Ohio counties, including those counties present within the Buffalo District of the U.S. Army Corps of Engineers.

Native species were assigned coefficient of conservatism values of 0 to 10. The rank of 0 was assigned to native taxa that are opportunistic invaders of natural areas and those that are typically part of ruderal communities. Rankings of 9 to 10 were used for those taxa that exhibit relatively high degrees of fidelity to a narrow range of synecological parameters. All alien (nonnative) taxa were assigned a value of 0.

The Floristic Quality Assessment Index (I) can be determined for any natural area from the tabulation of the coefficient of conservatism values. A higher index value expresses a natural area containing mostly native species, whereas a lower index value reflects human disturbance by taking into account the presence of alien (nonnative) taxa.

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